ORDER NO. AD9603073C2

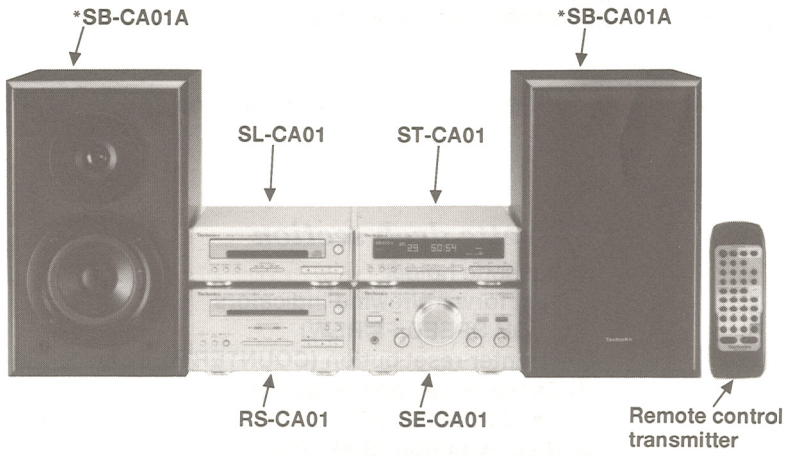
Service Manual

Cassette Deck

RS-CA01

Cassette deck

DOLBY SYSTEM*



Colour

(N)...Gold Type

Area

Suffix for Model No.	Area	Colour
(E)	Europe.	(N)

System: SC-CA01

Because of unique interconnecting cables, when a component requires service, send or bring in the entire system.

* Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY", and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

AR-1 MECHANISM SERIES

■ SPECIFICATIONS

Deck system	Stereo cassette deck
Track system	4 track, 2 channel
Recording system	AC bias
Bias frequency	100kHz
Erasing system	AC erase
Heads	
(Recording/ Playback head)	Permalloy head
(Erasing head)	Double gap ferrite head
Motors	
Capstan drive	DC servo motor
Reel table drive	DC motor
Tape speed	4.8 cm/s
Wow and flutter	0.1% (WRMS)
Fast forward and rewind times	Approx. 52 seconds with C-60 cassette tape
Frequency response (Dolby NR off)	
TYPE Ⅰ (Normal)	20Hz - 17kHz (DIN)
TYPE Ⅱ (High)	20Hz - 17kHz (DIN)
TYPE Ⅲ (Metal)	20Hz - 17kHz (DIN)
S/N (Signal level=max recording level, High)	
NR off	56dB (A weighted)
Dolby NR B on	66dB (A weighted)
Input sensitivity and impedance	
REC (IN)	280mV/ 23kΩ
Output voltage and impedance	
PLAY (OUT)	280mV/ 220Ω

■ **General**

Dimensions (WxHxD)	186x103x246 mm
Weight	1.6 kg

Notes:

1. Weight and dimensions shown are approximate.
2. Design and specifications are subject to change without notice.

System	Tuner	CD player	Amplifier	Cassette deck	Speakers
SC-CA01	ST-CA01	SL-CA01	SE-CA01	**RS-CA01**	* SB-CA01A

* Made in PAES

⚠ WARNING

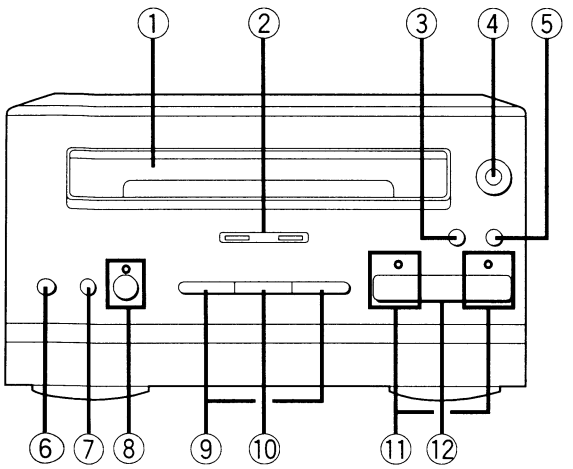
This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Technics®

■CONTENTS

NOTE:
Refer to the service manual for Model No. SE-CA01 (ORDER No. AD9603074C2) for information on "ACCESSORIES", "INSTALLATION ", "CONNECTIONS" and "PACKAGING".

■FRONT PANEL CONTROL



Cassette deck section

① Cassette holder
② Fast forward/rewind indicators (HIGH SPEED FF/REW)
③ Counter reset button (COUNTER RESET)
④ Cassette tray open/close button (▲ OPEN/CLOSE)
⑤ Display button (DISPLAY)
⑥ Dolby noise reduction button (DOLBY NR)
⑦ Reverse mode select button (REV MODE)
⑧ Record pause button and indicator (● REC PAUSE)
⑨ Fast forward/rewind/tape program sensor buttons ([TPS] ◀◀ , ▶▶ [TPS])
⑩ TPS skip button (TPS SKIP)
⑪ Playback buttons and indicators (◀ , ▶)
⑫ Stop button (■)

■LISTENING TO TAPES

Playback

Type of tape which can be played correctly:
The unit automatically identifies the type of tape.

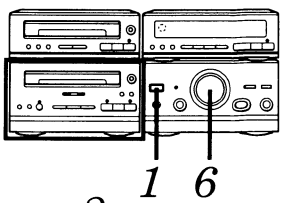
Normal position/TYPE Ⅰ	○
High position/TYPE Ⅱ	○
Metal/TYPE Ⅳ	○

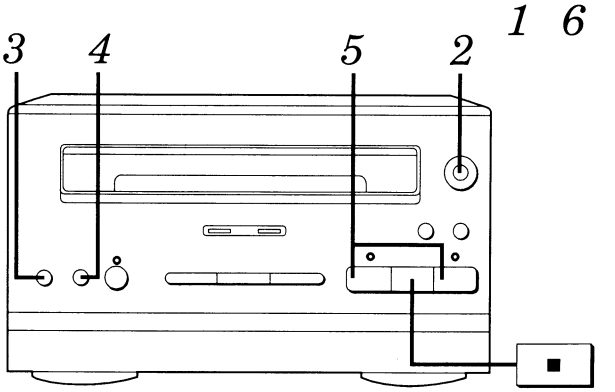
1 **Switch on the power.**

2 **Press ▲OPEN/CLOSE on deck, and then insert the tape.**
Load a tape with the exposed side facing the cassette holder's insertion part.
Insert the cassette tape until it touches the back of the compartment.
Press ▲OPEN/CLOSE once again to close the cassette holder.

3 To listen to a tape recorded in Dolby B NR
Press DOLBY NR and check " DD " is displayed.
When playing back a tape which was not recorded on Dolby NR system, press DOLBY NR so that indications go off.

4 **Press REV MODE to select the reverse mode.**
Each time you press REV MODE, one of the indicators will appears.
⇄ : The deck plays one side only, and then stops automatically.
⇄ : The deck plays both sides, and then stops automatically.





⇄ : The deck plays both sides 8 times, and then stops automatically.

5 **Press ◀ or ▶.**
▶ : The forward side will playback.
◀ : The reverse side will playback.

6 **Adjust the volume level as you like.**

To stop tape playback:
Press ■.

Note Keep your fingers out of the cassette tray so that you do not get pinched when it closes.

OPERATION CHECKS AND MAIN COMPONENT REPLACEMENT PROCEDURES

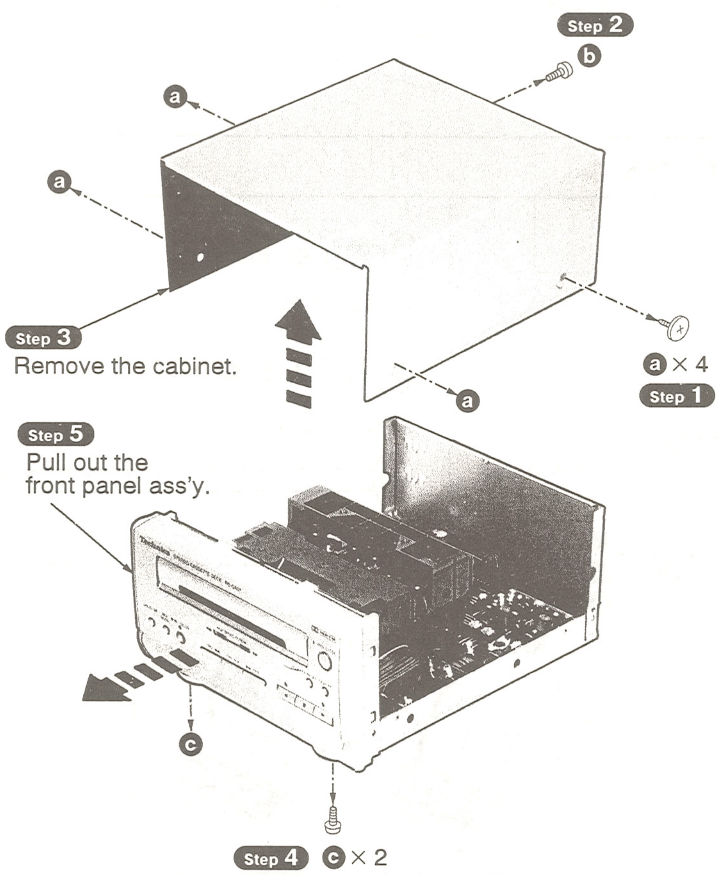
NOTE

1. **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
2. **For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.**
3. **Select items from the following index when checks or replacement are required.**
4. **Illustrated screws are equivalent to actual size.**
5. **Refer the parts No. on the page of "Main Component Replacement Procedures", if necessary.**

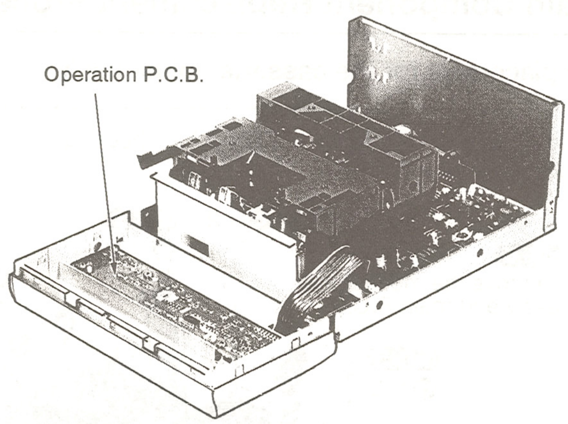
• Contents

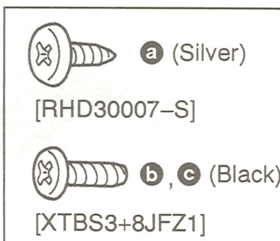
Checking Procedure for each P.C.B.

1. Checking for the operation P.C.B.



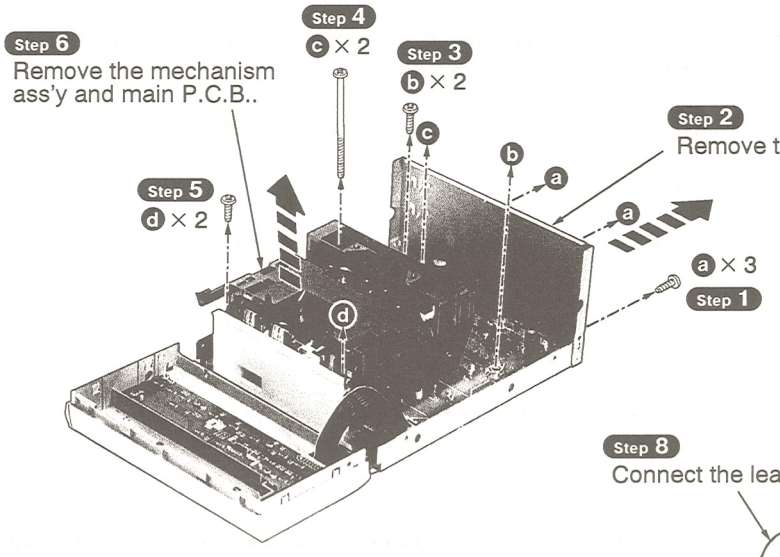
• **Check the operation P.C.B. as shown below.**



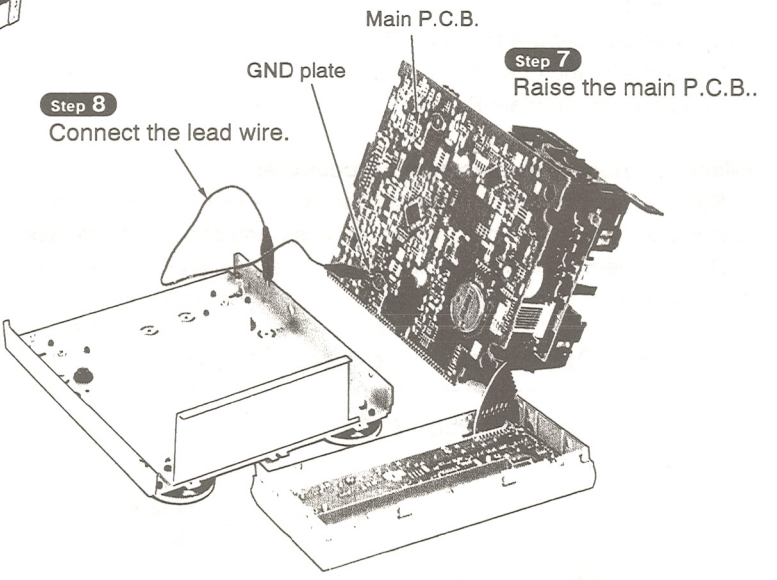


2. Checking for the main P.C.B.

• Follow the item 1 (Step 1 ~ Step 5) in checking procedures for each P.C.B. on page 3.



• **Check the main P.C.B. as shown below.**



ⓐ (Black)
[XTBS3+8JFZ1]

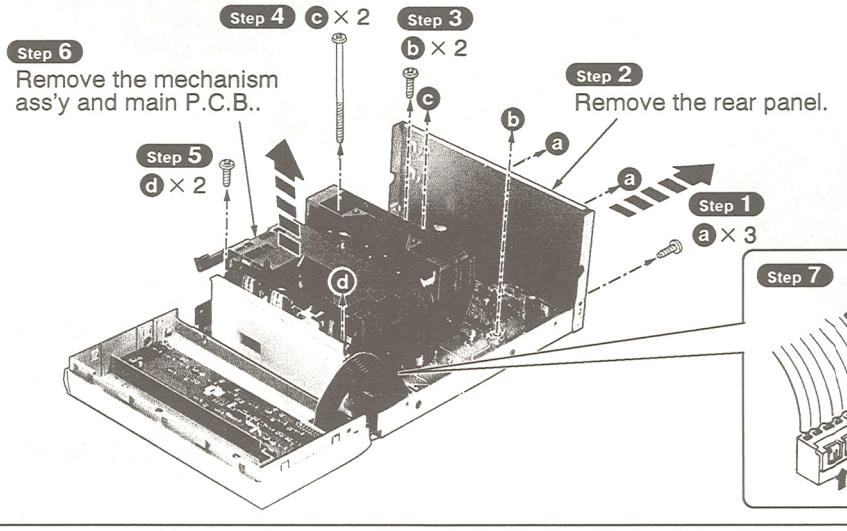
ⓑ, ⓓ (Black)
[XTB3+12JFZ]

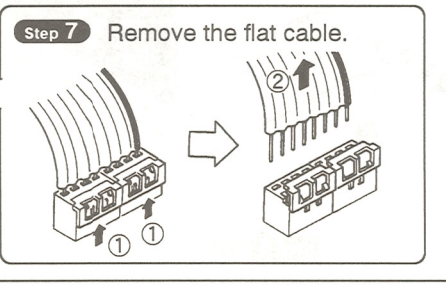
ⓒ
[RHD30069] (Black)

■ Main Component Replacement Procedures

1. Replacement for the cassette holder ass'y

• Follow the item 1 (Step 1 ~ Step 5) in checking procedures for each P.C.B. on page 3.

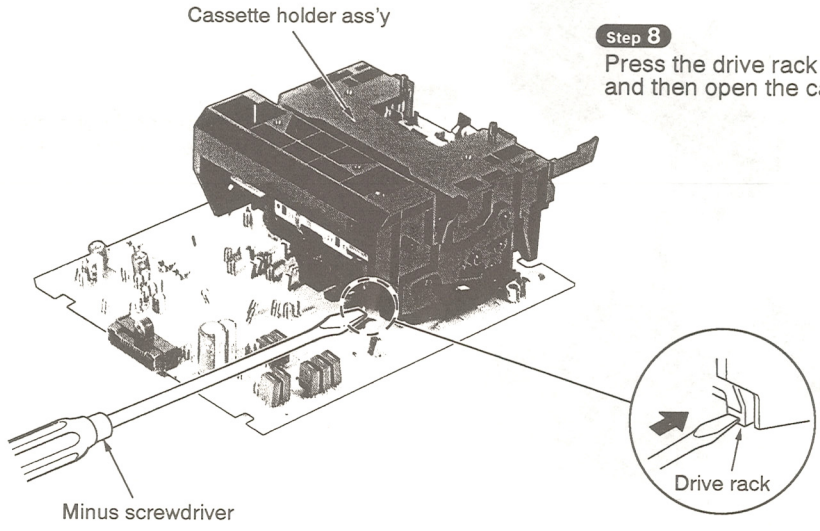




ⓐ (Black)
[XTBS3+8JFZ1]

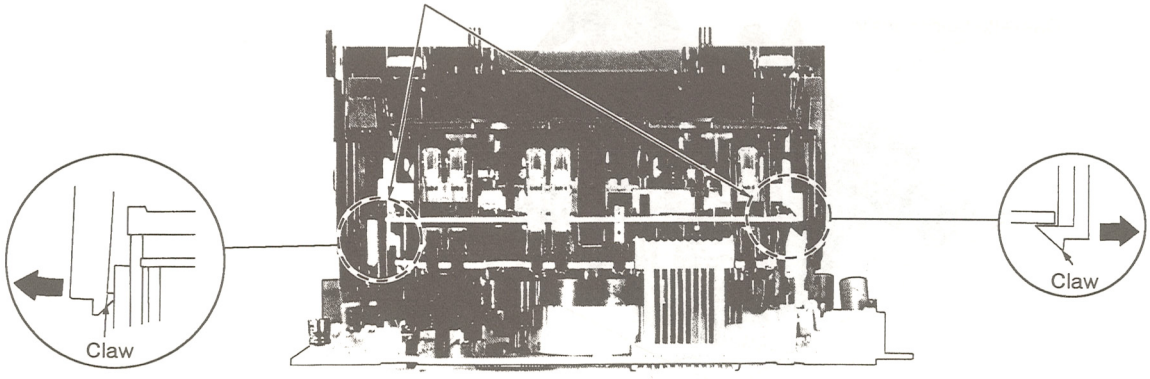
ⓑ, ⓓ (Black)
[XTB3+12JFZ]

ⓒ
[RHD30069] (Black)

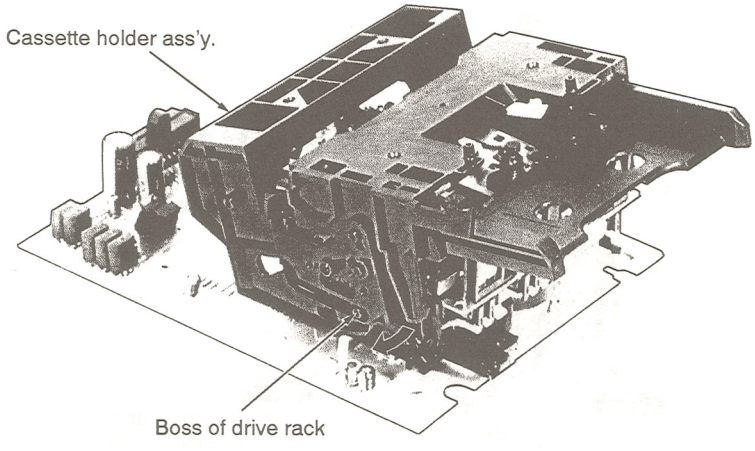


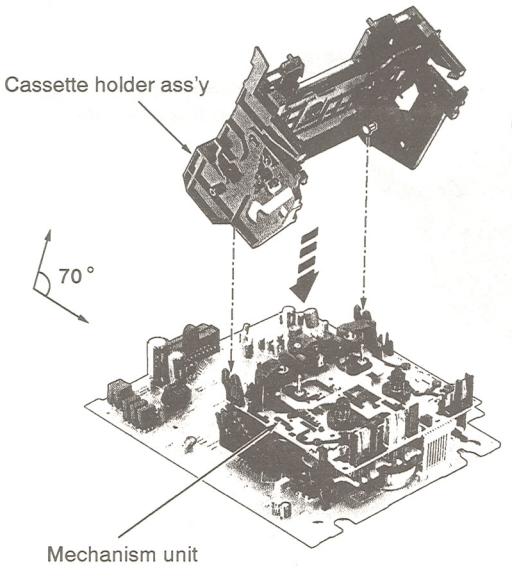
Step 8
Press the drive rack with minus screwdriver, and then open the cassette holder ass'y

Step 9
Release the 2 claws.



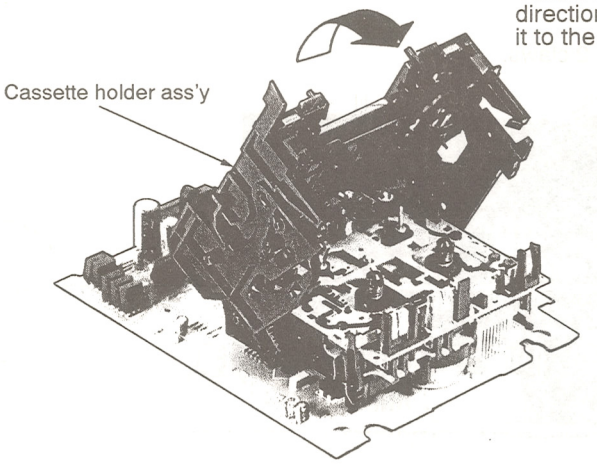
Step 10
Remove the cassette holder ass'y from the boss of drive rack.





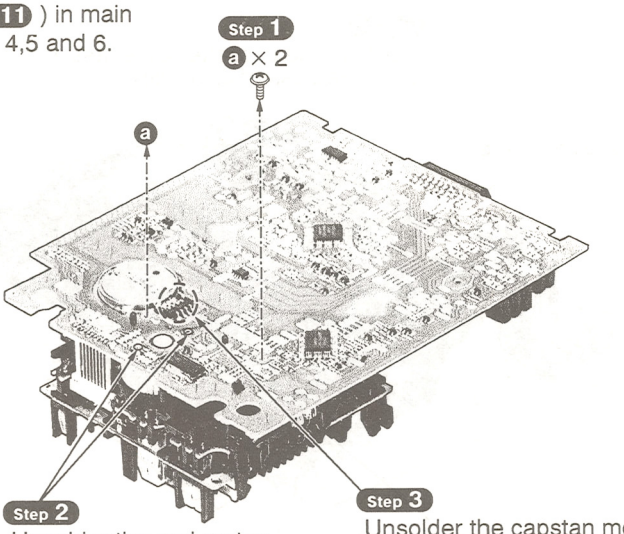
Step 3
Locate the cassette holder ass'y and mechanism unit at a 70 degree angle, and then install the cassette holder ass'y.

Step 4
Tilt the cassette holder ass'y in the direction of arrow, and then secure it to the mechanism ass'y.



2. Replacement for the belt, reel motor ass'y and capstan motor ass'y

- Follow the item 1 (Step 1 ~ Step 5) in checking procedures for each P.C.B. on page 3.
- Follow the item 1 (Step 1 ~ Step 11) in main component procedures on pages 4,5 and 6.



Step 2
Unsolder the reel motor terminals (2 points)

Step 3
Unsolder the capstan motor terminals (4 points)

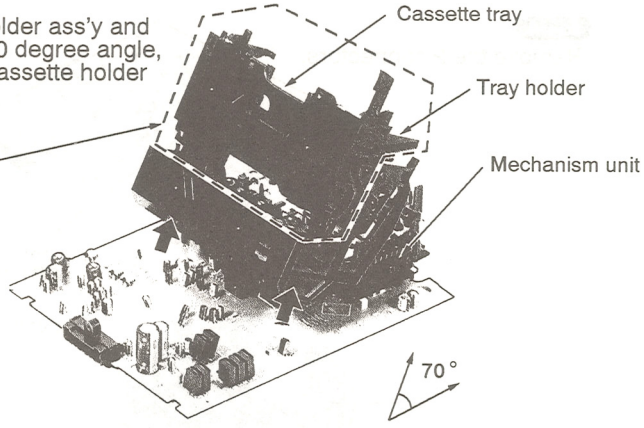
[XTW2+6S]

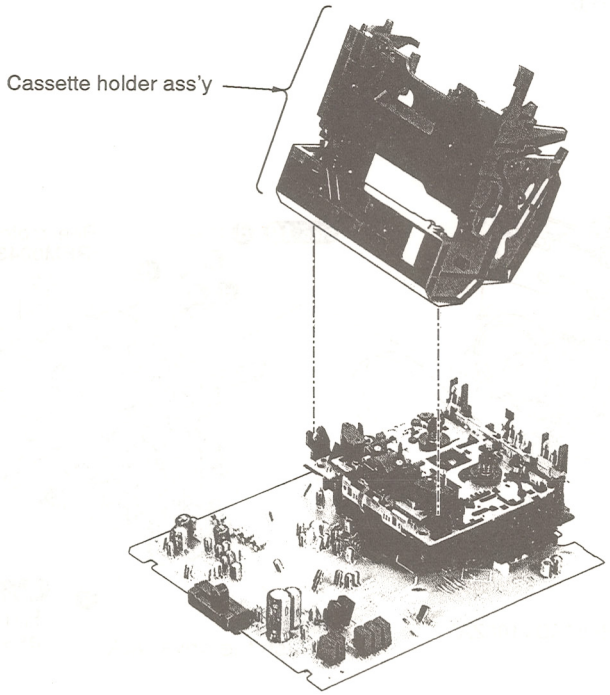
Step 11

Locate the cassette holder ass'y and mechanism unit at a 70 degree angle, and then pull out the cassette holder ass'y.

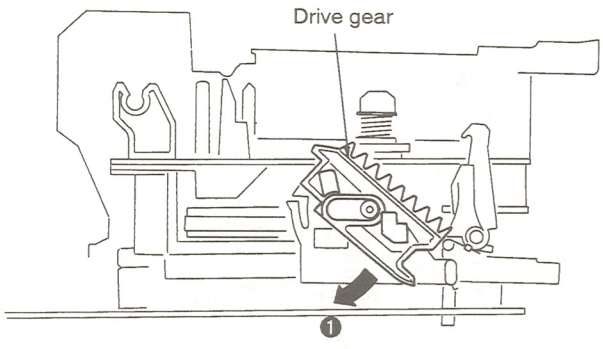
NOTE

When removing the cassette holder ass'y, avoid to pull it with holding cassette tray or tray holder.



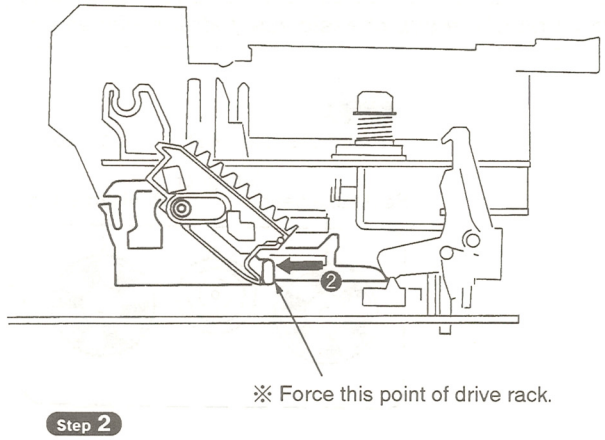


Installation of the cassette holder ass'y after replacement



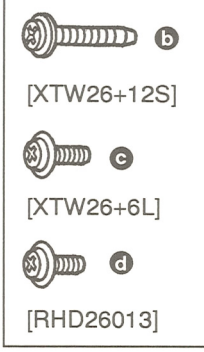
Step 1

Tilt the drive gear in the direction of arrow ❶.

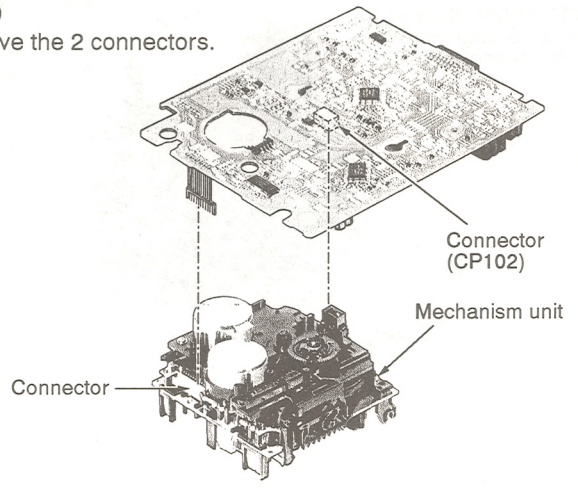


Step 2

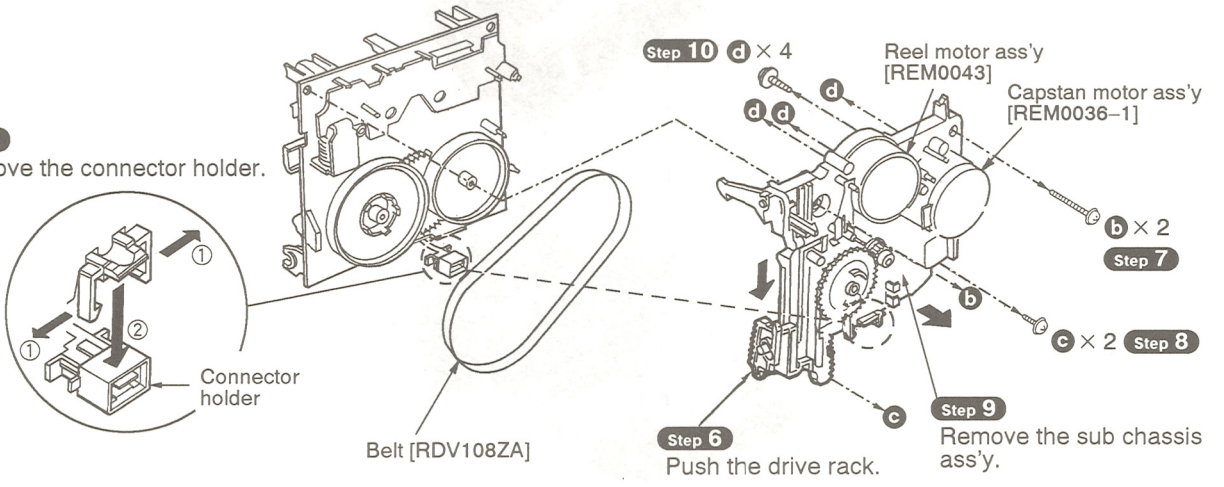
Force the drive rack fully in the direction of arrow ❷.



Step 4
Remove the 2 connectors.

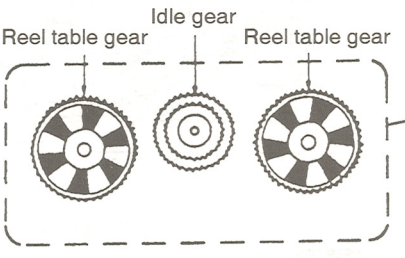


Step 5
Remove the connector holder.

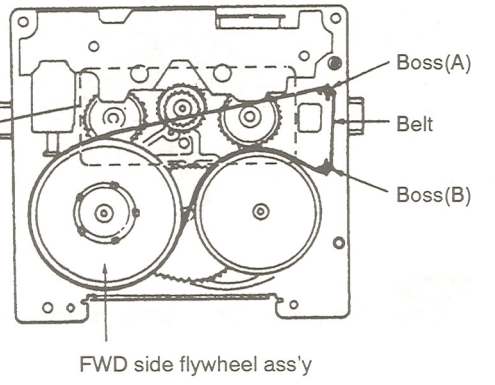


Installation of the sub chassis ass'y after replacement

Step 1
Place the idle gear in the center.

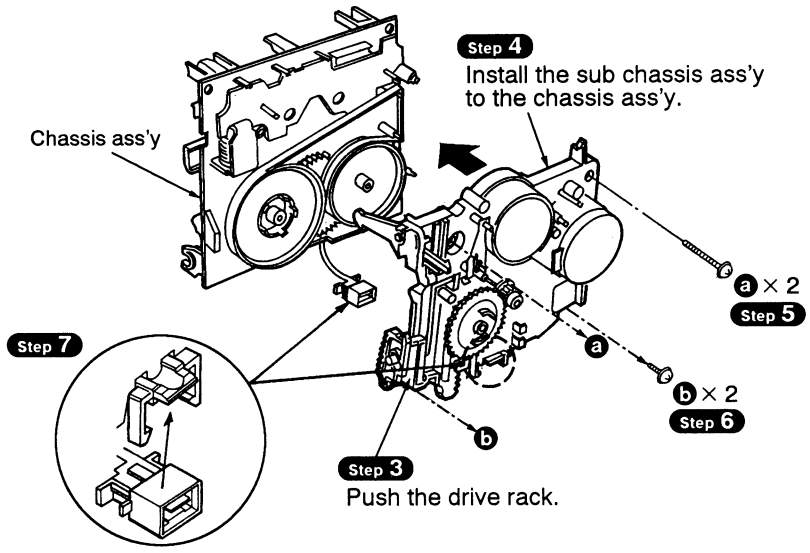


Step 2
Temporarily secure the belt.

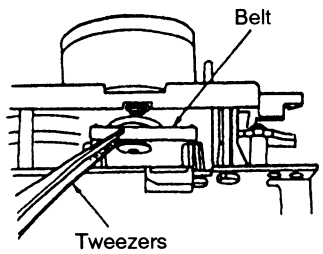


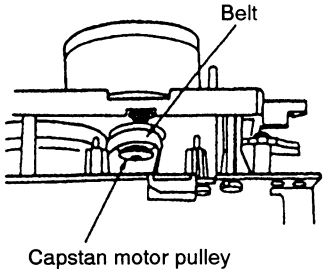
[XTW26+12S] ⓐ

[XTW26+6L] ⓑ



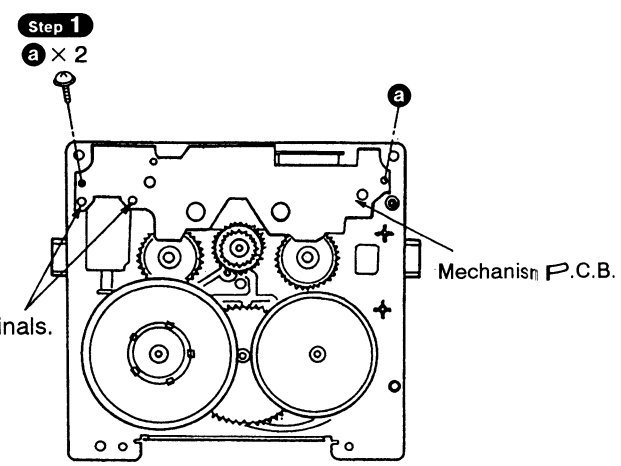
Step 8
Secure the belt with the capstan motor pulley.



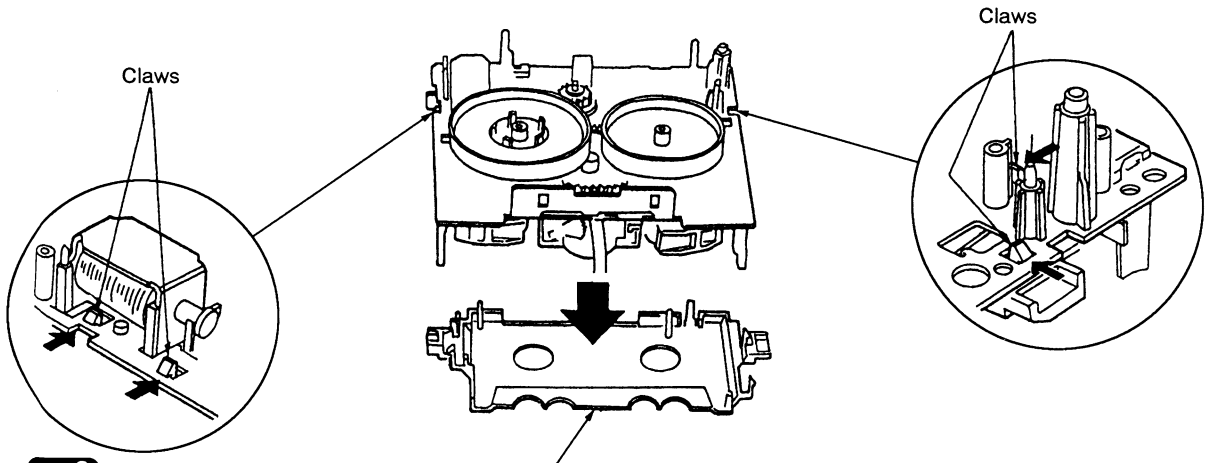


3. Replacement for the parts mounted on mechanism P.C.B. and solenoid

- Follow the item 1 (Step 1 ~ Step 5) in checking procedures for each P.C.B. on page 3.
- Follow the item 1 (Step 1 ~ Step 11) in main component procedures on pages 4,5 and 6.
- Follow the item 2 (Step 1 ~ Step 9) in main component procedures on pages 7 and 8.



[XTW2+6S] ⓐ

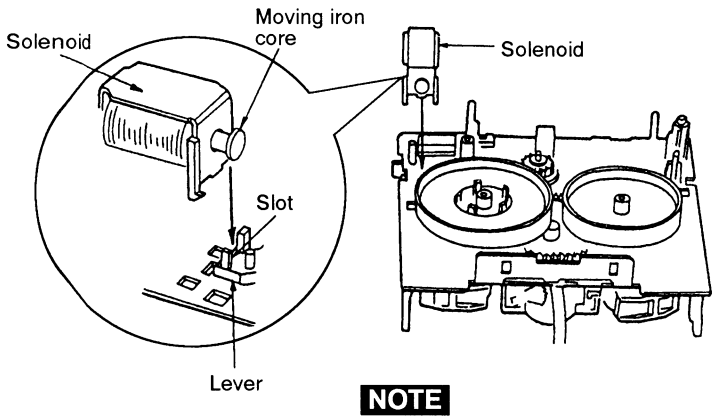


Step 3
Release the 4 claws.

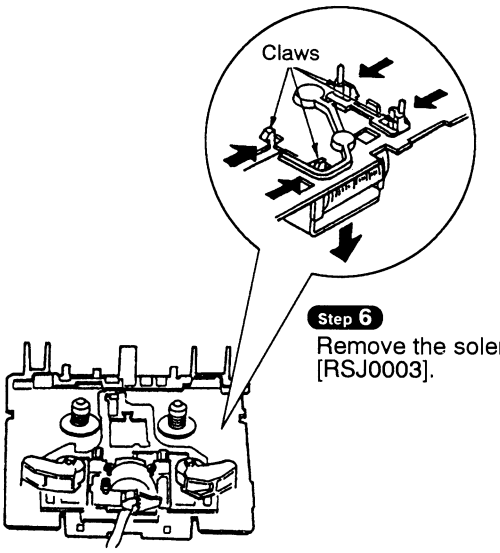
Step 4
Remove the ornament plate.

Step 5
Release the 4 claws.

Notice for installing the solenoid



NOTE
- The moving iron core of solenoid should be aligned with slot of lever.



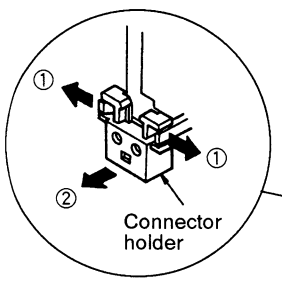
Step 6
Remove the solenoid [RSJ0003].

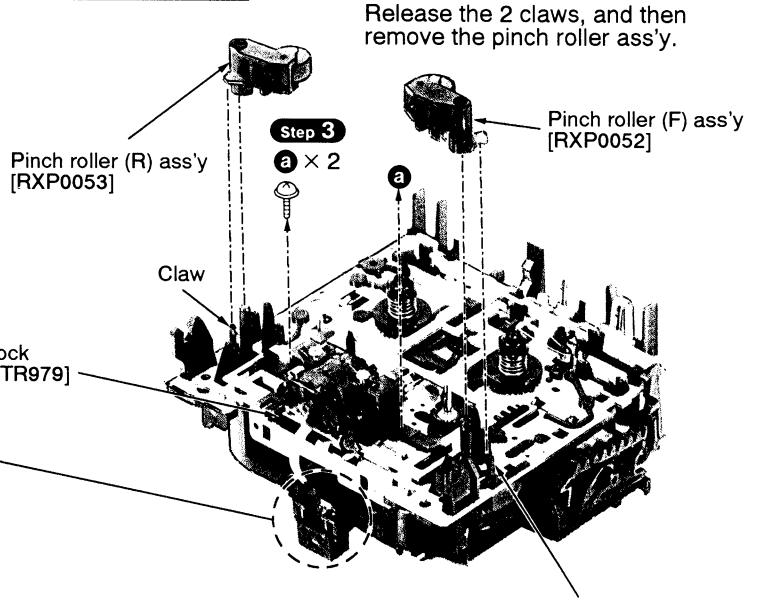
4. Replacement for the head block and pinch roller ass'y

- Follow the item 1 (Step 1 ~ Step 5) in checking procedures for each P.C.B. on page 3.
- Follow the item 1 (Step 1 ~ Step 11) in main component procedures on pages 4,5 and 6.

Step 1
Release the 2 claws, and then remove the pinch roller ass'y.

Step 2
Remove the connector holder.





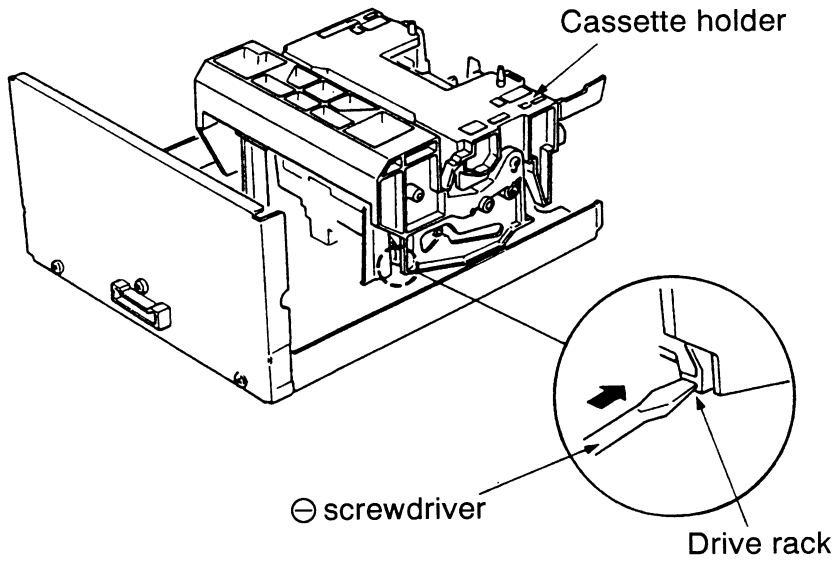
ⓐ [XTW2+5L]

• Manually opening and closing the cassette holder assembly

• Follow the item 1 (Step 1 ~ Step 5) in checking procedures for each P.C.B. on page 3.

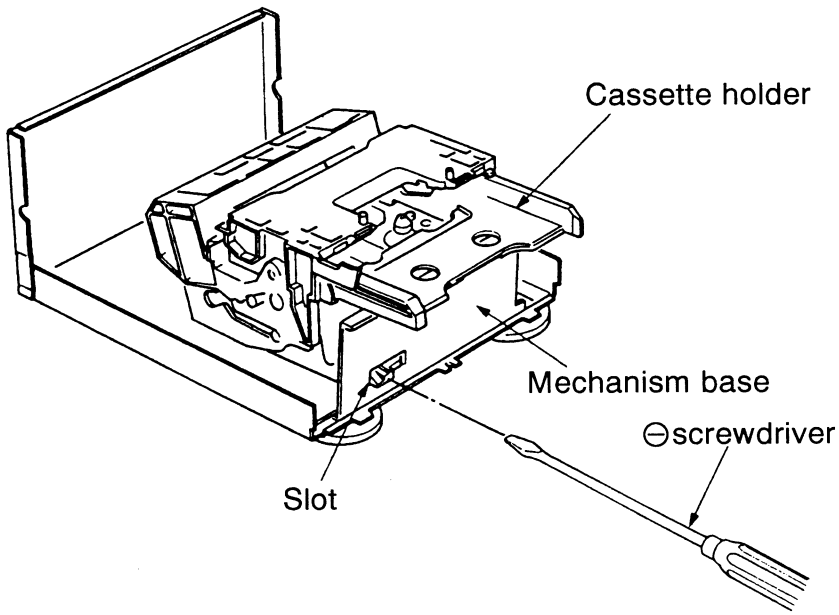
OPENING

Push the drive rack in the direction of the arrow with a ⊖screwdriver.



CLOSING

Push the drive rack back into position by inserting a ⊖screwdriver into the holes on the P.C.B.



■MEASUREMENTS AND ADJUSTMENTS

This unit RS-CA01 is designed to operate on power supplied from the Amplifier (SE-CA01) through Tuner (ST-CA01). When connecting the unit to other system components, do not connect to the Amplifier (SE-CA01) directly. Be sure to connect this unit through the Tuner (ST-CA01).
When operating the unit RS-CA01 alone for testing and servicing, without having power supplied from the Amplifier (SE-CA01) and Tuner (ST-CA01), use the following method.

● To Supply Power Source

1. Short three sections the test points TP602, A. GND, and TP702.
2. Apply 11 AC power to test points between TP601 and TP602 (GND), and TP603 and TP602 (GND).
   Note: When operated alone, this unit automatically enter the TEST mode, causing indicators to blink.

● To Check Signals

Connect an oscilloscope or a built-in amplifier speaker between line output for Lch (TP201) and jumper (J118) A. GND, and line out for Rch (TP202) and jumper (J118) A. GND and check if the signals are outputting from this unit.

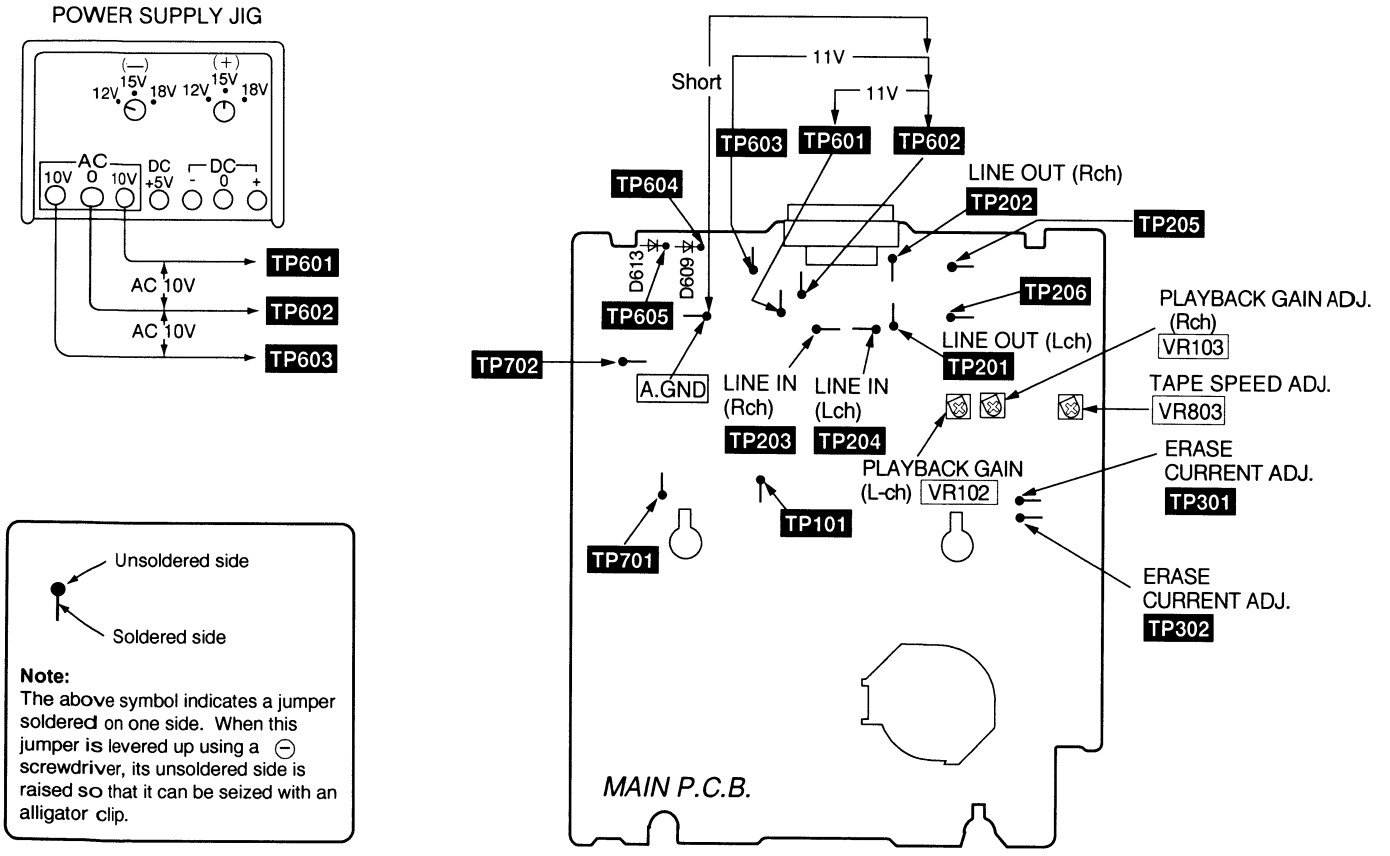


Fig. 1

Measurement Condition
- Dolby NR switch; OFF
- Make sure heads are clean.
- Make sure capstan and pressure roller are clean.
- Judgeable room temperature 20 ± 5°C (68± 9°F)

Measuring instrument
- EVM (Electronic Voltmeter)
- AF oscillator
- Digital frequency counter

Test Tape
- Head azimuth adjustment (8kHz, –20dB); QZZCFM
- Tape speed adjustment (3kHz, –10dB); QZZCWAT
- Recording/ playback frequency response adjustment; QZZCFM (315Hz/0dB, 315Hz/–20dB, 12.5kHz~63Hz/–20dB)
  Normal blank tape
  CrO2 blank tape
  Metal blank tape

HEAD AZIMUTH ADJUSTMENT

1. Connect the measuring instrument as shown in Fig. 2.
2. Replace azumuth screws for both forward and reverse direction after removing the screw-locking bond left on the head base.
   Fine adjustment of azimuth can not be performed with remaining the bond on the head base.
   (Supply part No. of azimath adjusting screw: **RHD17015**)
3. Playback the azimuth adjustment portion (8kHz, –20dB) of test tape (QZZCFM). Adjust the azimuth adjusting screw until the outputs of the L/R-ch are maximized. (Refer to Fig. 3.)
   Make sure that the difference in the peak level between the left and right channels does not exceed 0.5dB.
4. Perform the same adjustment in reverse playback mode.

Check of the level difference forward and reverse directions

5. Playback the playback gain adjustment portion (315 Hz, 0dB) of test tape (QZZCFM). Check if level difference between forward and reverse direction is within 1.5 dB.
6. After the adjustment, apply screwlock to the azimuth adjusting screw.

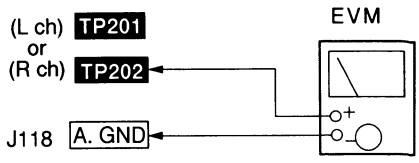


Fig. 2

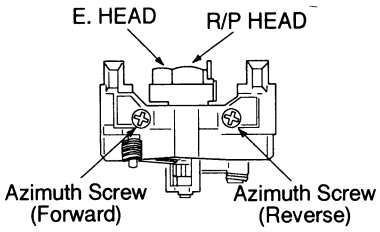


Fig. 3

TAPE SPEED ADJUSTMENT

Note: When connecting the unit to other system components for testing, short the section between the test points **TP701** and **TP702** and turn on the entire system. (The unit is set to the TEST mode, indicators will blink.)

Normal speed (Standard value: 3000 ± 45Hz)

1. Connect the measuring instrument as shown in Fig. 4.
2. Playback the middle portion of the test tape (QZZCWAT).
3. Adjust **VR803** for the output value shown below. (Refer to Fig. 1)

Adjustment target: 3000 ± 15Hz
Standard value: 3000 ± 45Hz

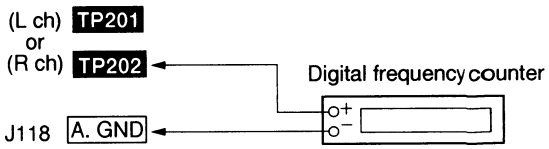


Fig. 4

Note: When connecting the unit to other system components, disconnect the short between the test points **TP701** and **TP702**.

PLAYBACK GAIN ADJUSTMENT

1. Connect the measuring instrument as shown in Fig. 5.
2. Find the start of the 315Hz/0dB section of the test tape (QZZCFM), insert the tape, and play it back (FWD).
3. Adjust **VR102** (Lch) [**VR103** (Rch)] so that the output is within the standard value. (Refer to Fig. 1).

Standard value: 265mV ± 300mV

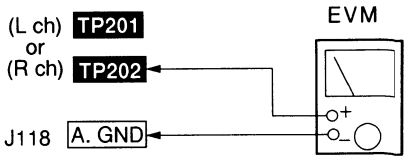


Fig. 5

ERASE CURRENT CONFIRMATION

1. Connect the measuring instrument as shown in Fig. 6.
2. Insert the blank tape, and press the REC PAUSE button.
3. Check if the output at this time between the erase current confirmation point **TP301** and **TP302** (the output on both edged of R313) is within the standard value.

Standard value	**EVM reading**
Normal tape : 70 ± 25 mA	**(70 ± 25 mA)**
CrO_2 tape : 100 ± 25 mA	**(100 ± 25 mA)**
Metal tape : 160± 25 mA	**(160 ± 25 mA)**

Note: The test tape is not required when confirming the erase current.

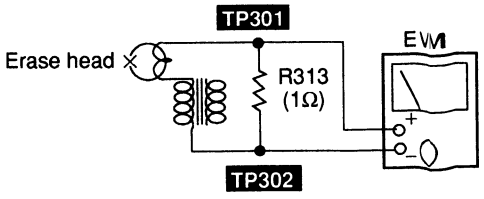


Fig. 6

Playback frequency response check

1. Connect the measuring instrument as shown in Fig. 7
2. Playback the 315Hz/–20dB and 12.5 kHz to 63 Hz/–20dB sections of the test tape (QZZCFM) and then, using the 315 Hz/–20dB playback output as a reference (0 dB), confirm that the playback frequency response is within the range shown in Fig. 8.

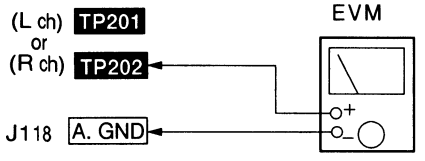


Fig. 7

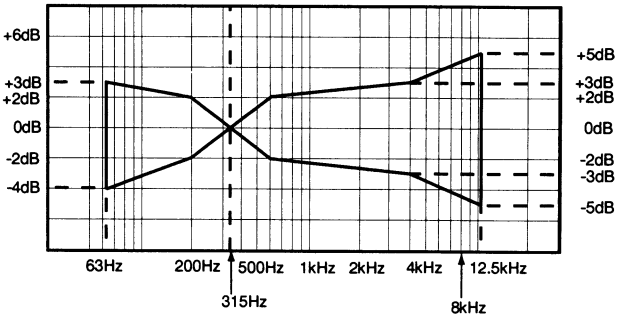


Fig. 8

Recordnig/playback frequency response and gain check

Normal tape check

1. Connect the measuring instrument as shown in Fig. 9.
2 Insert a Normal-type blank tape.
3. Record signals at 50 Hz, 100Hz, 200 Hz, 500 Hz, 1kHz, 2kHz, 10kHz and 12.5 kHz (28mV).
4. Set the playback frequency of the recorded signals at 1kHz as the reference response (0 dB).
5. Playback the recorded signals to confirm that the output is within the range of the overall frequency response shown in Fig. 10.

CrO2/ Metal tape check

6. Repeat steps 3 to 5 for each tape and confirm that the output for each is within the range of the overall frequency response shown in Fig. 1 1.

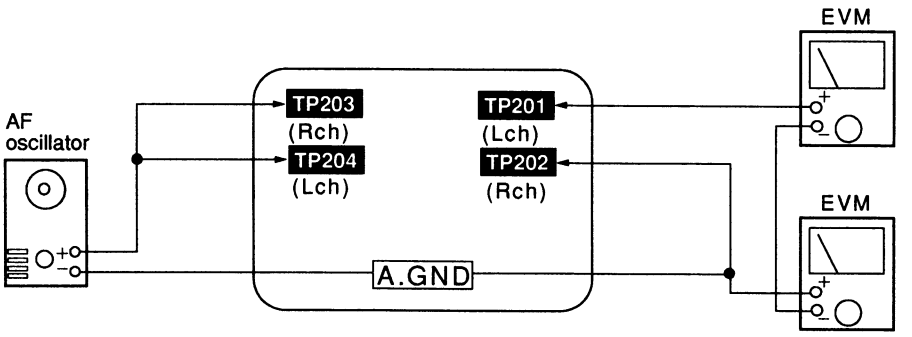


Fig. 9

Normal Overall frequency response chart (NR OUT)

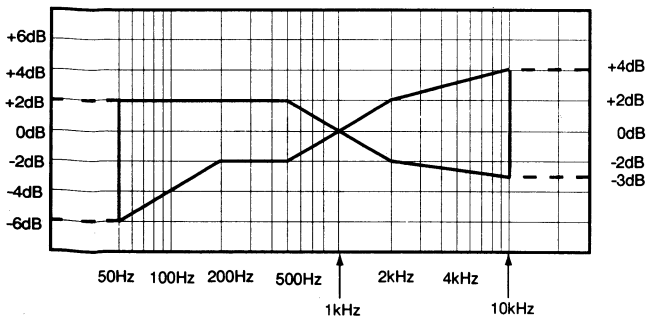


Fig. 10

CrO2/ Metal Overall frequency response dhart (NR OUT)

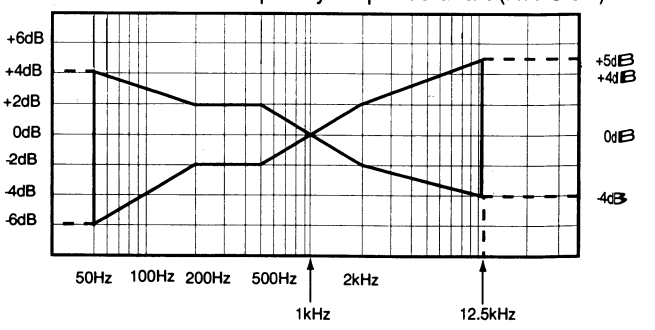
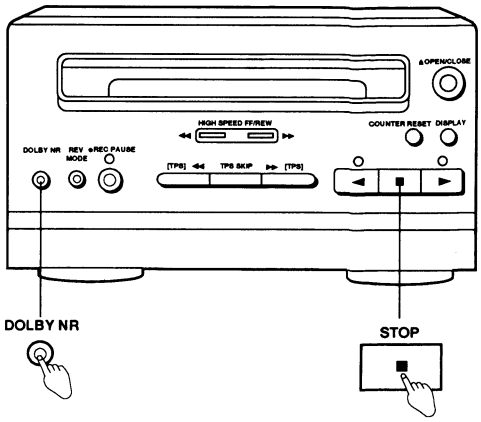


Fig. 11

■SERVICE MODE FUNCTION OF CASSETTE MECHANISM

This unit is equipped with a service mode function of cassette mechanism using the LED indicators [R. PLAY (◀), F. PLAY (▶), REW (◀◀), FF(▶▶)]. Use this function during maintenance to check faults of the items below.



• Cassette tapes to be prepared

Metal tape: Recorded music tape with only one erase-prevention tab intact (use middle portion of the tape).

Normal tape: / CrO_2 tape: Recorded music tape with both erase-prevention tabs intact (use middle portion of the tape).

• Selecting Service Mode

1. Turn on the power to the unit. (If RS-CA01 unit is removed from system, turn it on according to the procedure on page 12.)
2. Check that no tape is inserted in the cassette deck.
   Press the DOLBY NR button for about 2 seconds, and keep pressing it, also press the STOP button for about 2 seconds. (Service mode cannot be selected with a tape inserted in the cassette deck.)
3. The LED indicator for REC PAUSE flashes, the service mode has been activated.

• Mechanism Check

Open the cassette holder. (▲ OPEN/ CLOSE button)

▲OPEN/CLOSE

Insert a metal tape into the deck with an intact erase-prevention tab on the right side, and close the cassette holder. (OPEN/CLOSE button)

▲OPEN/CLOSE

Press the TPS ▶▶ button. (Tape fast forwards for about 2 seconds then stops.)

[TPS] ◀◀ TPS SKIP ▶▶ [TPS]

Open the cassette holder and turn over the metal tape (intact erase-prevention tab on the left side.) (▲ OPEN/CLOSE button)

▲OPEN/CLOSE

Close the cassette holder. (▲ OPEN/ CLOSE button)

▲OPEN/CLOSE

Press the ◀◀ TPS button. (Tape rewinds for about 2 seconds then stops.)

[TPS] ◀◀ TPS SKIP ▶▶ [TPS]

Open the cassette holder and replace the metal tape with a CrO_2 tape. (▲ OPEN/CLOSE button)

▲OPEN/CLOSE

Close the cassette holder. (▲ OPEN/ CLOSE button)

▲OPEN/CLOSE

Press the PLAY ▶ button. (After TPS operation and check, the tape stop.)

Open the cassette holder and replace the CrO_2 tape with a normal tape. (▲ OPEN/CLOSE button)

▲OPEN/CLOSE

Close the cassette holder. (▲ OPEN/ CLOSE button)

▲OPEN/CLOSE

Press the ● REC/ PAUSE button. (No record operation.)

●REC PAUSE

Press the STOP button. Fault items 1 to 10 can be checked as the four LED indicators turn off or flash. (Refer to Table 1)
Each time the ■ STOP button is pressed, the fault items are displayed in sequence.

* If no fault, all indicators go out.

• Exiting-Self-Check Mode

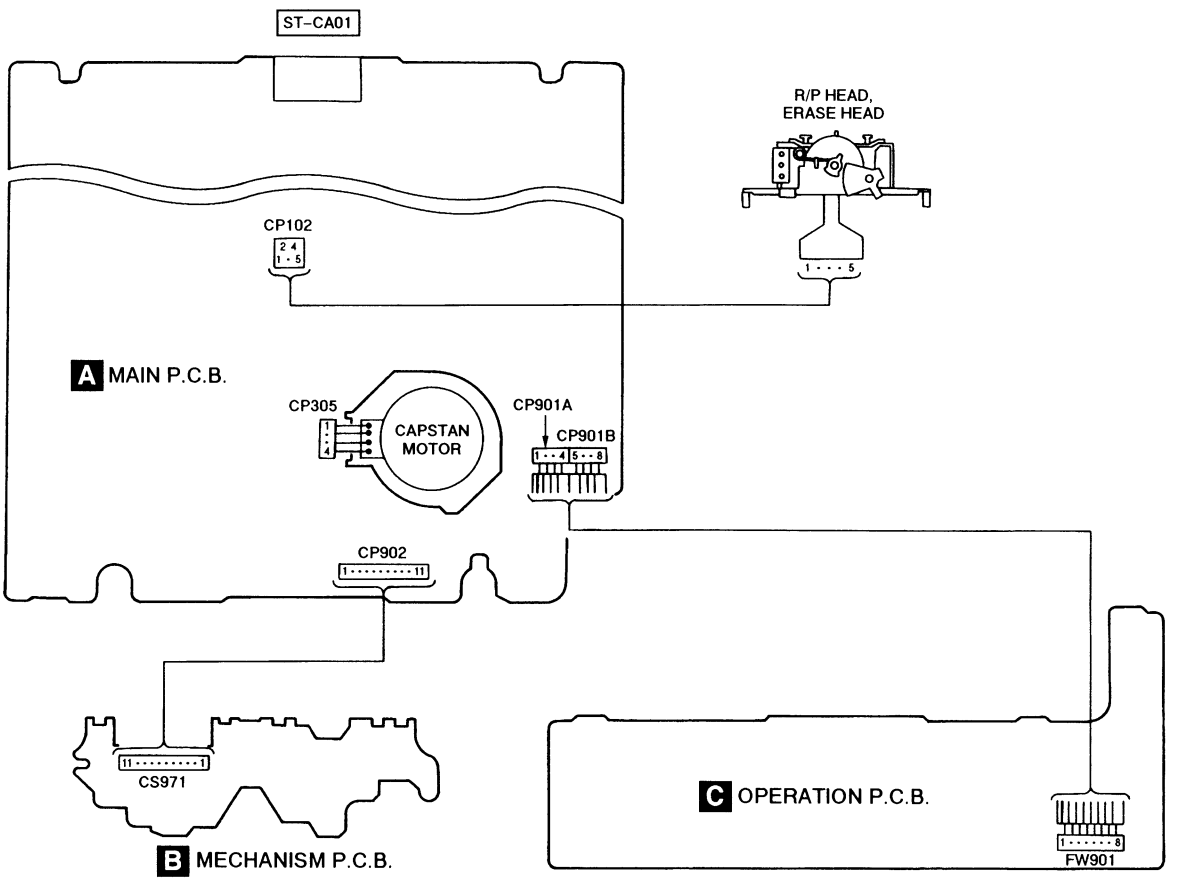
1. Press the ■ STOP button for more than 5 seconds. (Diagnostic contents stored in memory are erased.)
2. Remove the cassette tape from the cassette holder.
3. Turn off the unit.

No.	LED indicator status (off/flashing)				Fault location
	◀	▶	◀◀	▶▶	
1.	—	—	—	●	MODE detect switch
2.	—	—	●	—	REC prevention switch
3.	—	—	●	●	Half detect switch
4.	—	●	—	—	Deck OPEN switch
5.	—	●	—	●	Deck CLOSE switch
6.	—	●	●	—	CrO_2 tape detect switch
7.	—	●	●	●	Metal tape detect switch
8.	●	—	—	—	Reel pulse detect system (Hall IC, etc.)
9.	●	—	—	●	TPS operation
10.	●	—	●	—	Reel motor

Notes:
"●" : Flashing
"—" : off
* If no fault, all indicators go out.

Table 1: Service Mode Diagnostic Items

■WIRING CONNECTION DIAGRAM



■SCHEMATIC DIAGRAM (Parts list on pages 32～35.)

● This schematic diagram may be modified at any time with development of new technology.

Notes:

- **S803**: Cassette holder open detection switch in "off" position.
- **S804**: Cassette holder close detection switch in "off" position.
- **S900**: Stop (□) switch.
- **S901**: Dolby noise-reduction switch (DOLBY NR).
- **S902**: Rewind tape program sensor switch (◀◀ [TPS]).
- **S903**: Reverse-side playback switch (◁).
- **S904**: TPS skip switch (TPS SKIP).
- **S905**: Forward-side playback switch (▷).
- **S906**: Fast forward tape program sensor switch (▶▶ [TPS]).
- **S909**: Rec pause switch (● REC PAUSE).
- **S910**: Cassette holder open/ close switch (▲ OPEN/ CLOSE).
- **S911**: Counter display switch (DISPLAY).
- **S912**: Counter reset switch (RESET).
- **S915**: Reverse-mode select switch (REV. MODE).
- **S971**: Mode switch in "off" position.
- **S972**: Half switch in "off" position.
- **S973**: ATS (CrO_2) switch in "off" position.
- **S974**: Reverse rec. inhibit switch in "off" position.
- **S975**: Forward rec. inhibit switch in "off" position.
- **S976**: ATS (Metal) switch in "off" position.

- Resistance are in ohms (Ω), 1/4 watt unless specified otherwise.
  1K=1,000 (Ω), 1M=1,000 (Ω)
- Capacity are in micro-farads (μF) unless specified otherwise.
- All voltage values shown in circuitry are under no signal condition and playback mode with volume control at minimum position otherwise specified.
  ( )..... Voltage values at record mode.
  For measurement us EVM.
- Voltage values and waveforms are measured as indicated in the schematic diagram when test points between TP604 and TP605, and between A. GND and TP602 are shorted.
- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.
  When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.
- : Positive voltage line
  : Negative voltage line
  : Playback signal line
  : Recording signal line

● Caution!

IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.

- Cover the parts boxes made of plastics with aluminum foil.
- Ground the soldering iron.
- Put a conductive mat on the work table.
- Do not touch the legs of IC or LSI with the fingers directly.

● ⟶ : Playback signal line ● ⟹ : Recording signal line

A MAIN CIRCUIT (P.C.Board:on page 23)

PLAY BACK SIGNAL(Lch)

LINE IN POINT TP204 (L ch)

LINE IN POINT TP203 (Rch)

LINE OUT POINT TP201 (L ch) TP202 (R ch)

Q101 2SJ163PQRTX HEAD SELECT (REC:ON)

Q102 2SJ163PQRTX HEAD SELECT (REC:ON)

Q103,104 2SJ163PQRTX HEAD SELECT (PLAY:ON)

IC101 A1898QT6 R/P EQ AMP

IC103 BA7755AF R/P SELECT

Q107 DTA114EUT107 R/P SELECT

IC201 CXA1102M-T4 DOLBY NR

Q201,202 2SJ163PQRTX SWITCHING

Q105 Q106 2SJ163PQRTX SWITCHING

Q113,114 2SD1328RSTTX MUTING

Q112 DTA114EUT107 SWITCHING CONT.

Q706 UN5214TX RESET SIGNAL GENERATOR

PLAYBACK GAIN ADJ.(Lch)

PLAYBACK GAIN ADJ.(Rch)

ERASE CURRENT CHECK POINT TP301 TP302

Q302 2SD1328RSTTX SWITCHING (REC:ON)

Q303,304 2SD874QRSTX BIAS OSC

Q301 2SD601QRSTX BIAS OSC CONT.

Q305 DTC144EUT107 BIAS OSC CONT.

Q306 DTC144EUT107 BIAS OSC CONT.

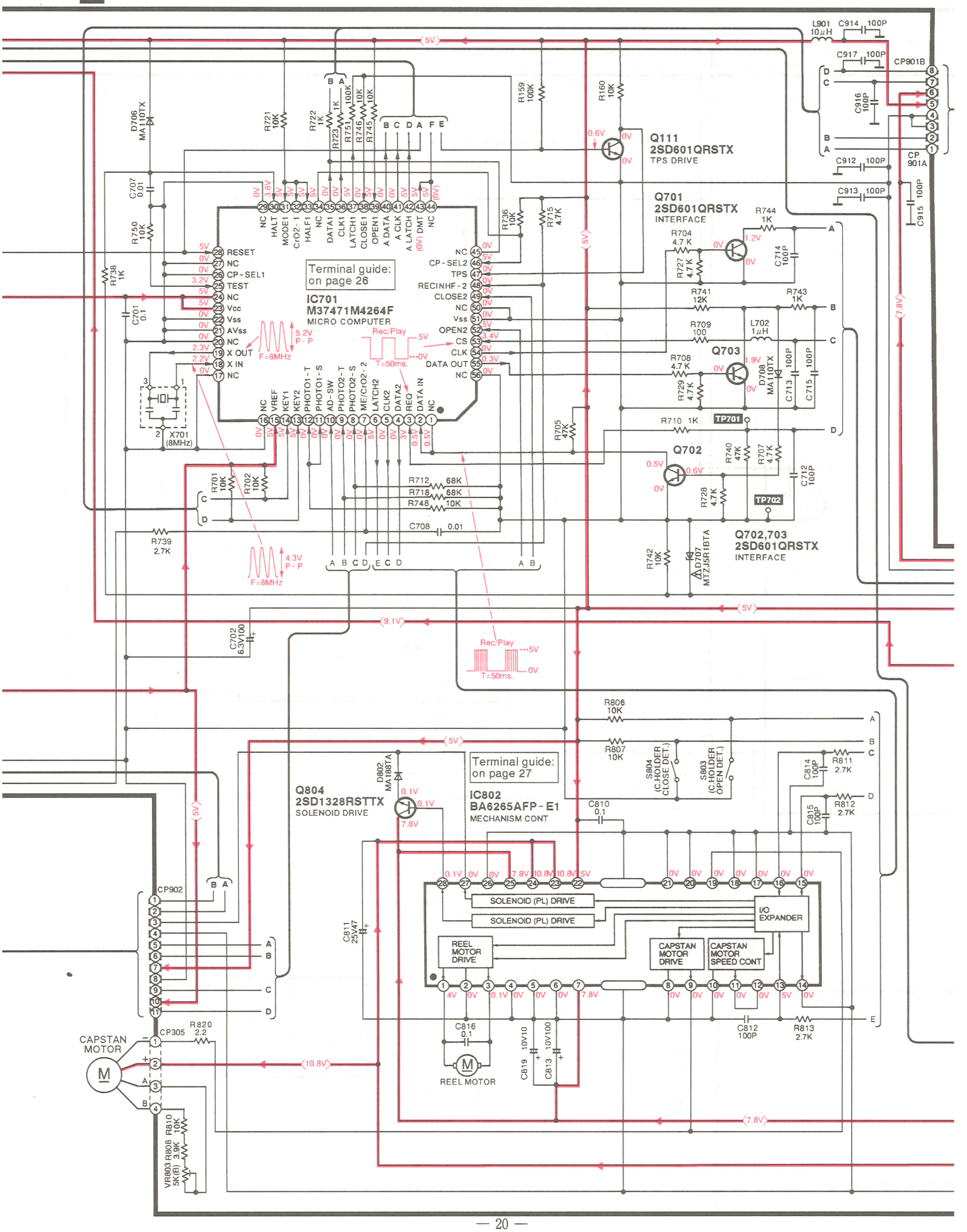
B MECHANISM CIRCUIT (P.C.Board:on page 22)

D971 RVD1SS133TA SOLENOID

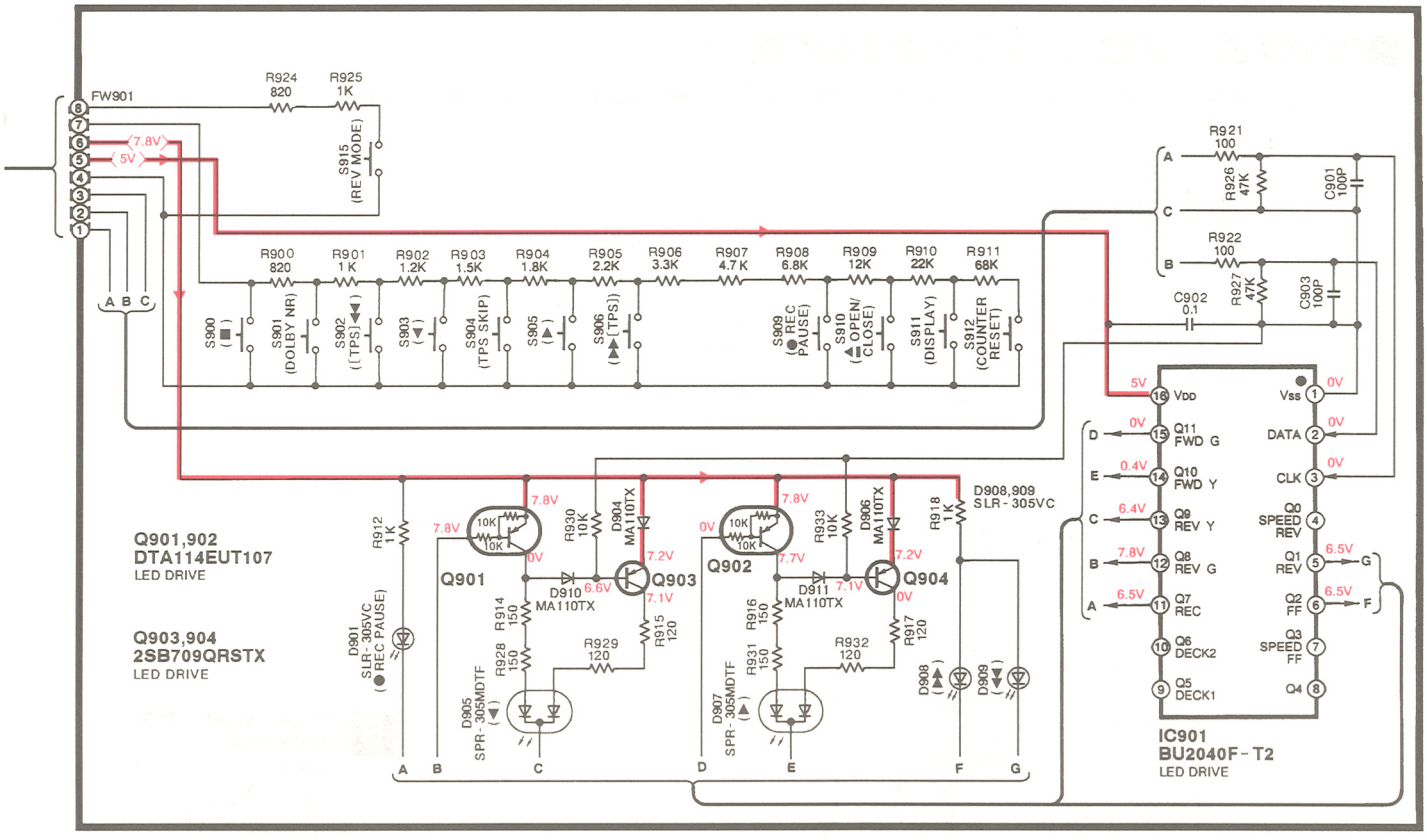
IC971,972 RVSGP2S24BC PHOTO INTERRUPTER

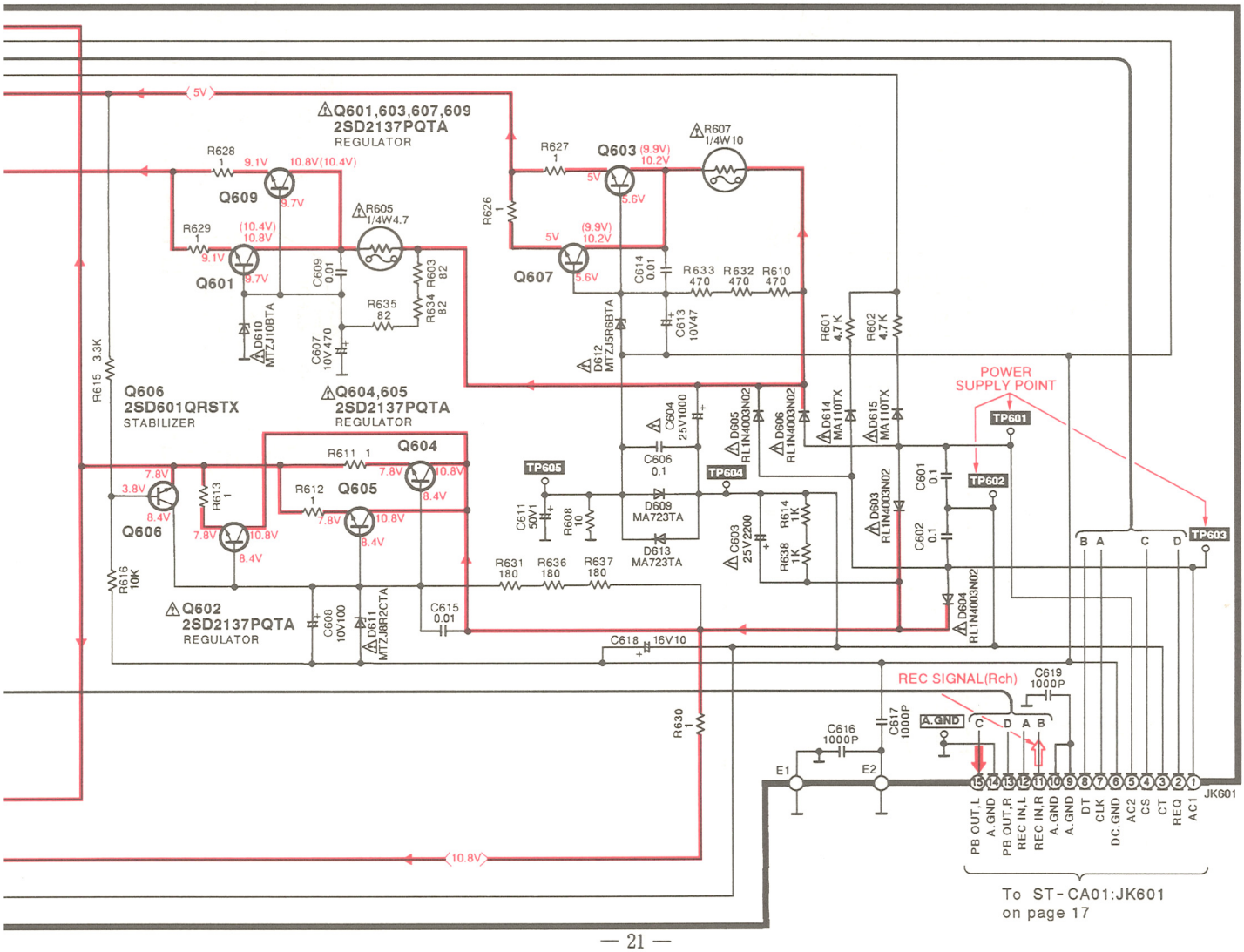
A MAIN CIRCUIT (P.C.Board:on page 23)

● ➡ : Playback signal line ● ⇨ : Recording signal line



C OPERATION CIRCUIT (P.C.Board:on page 22)

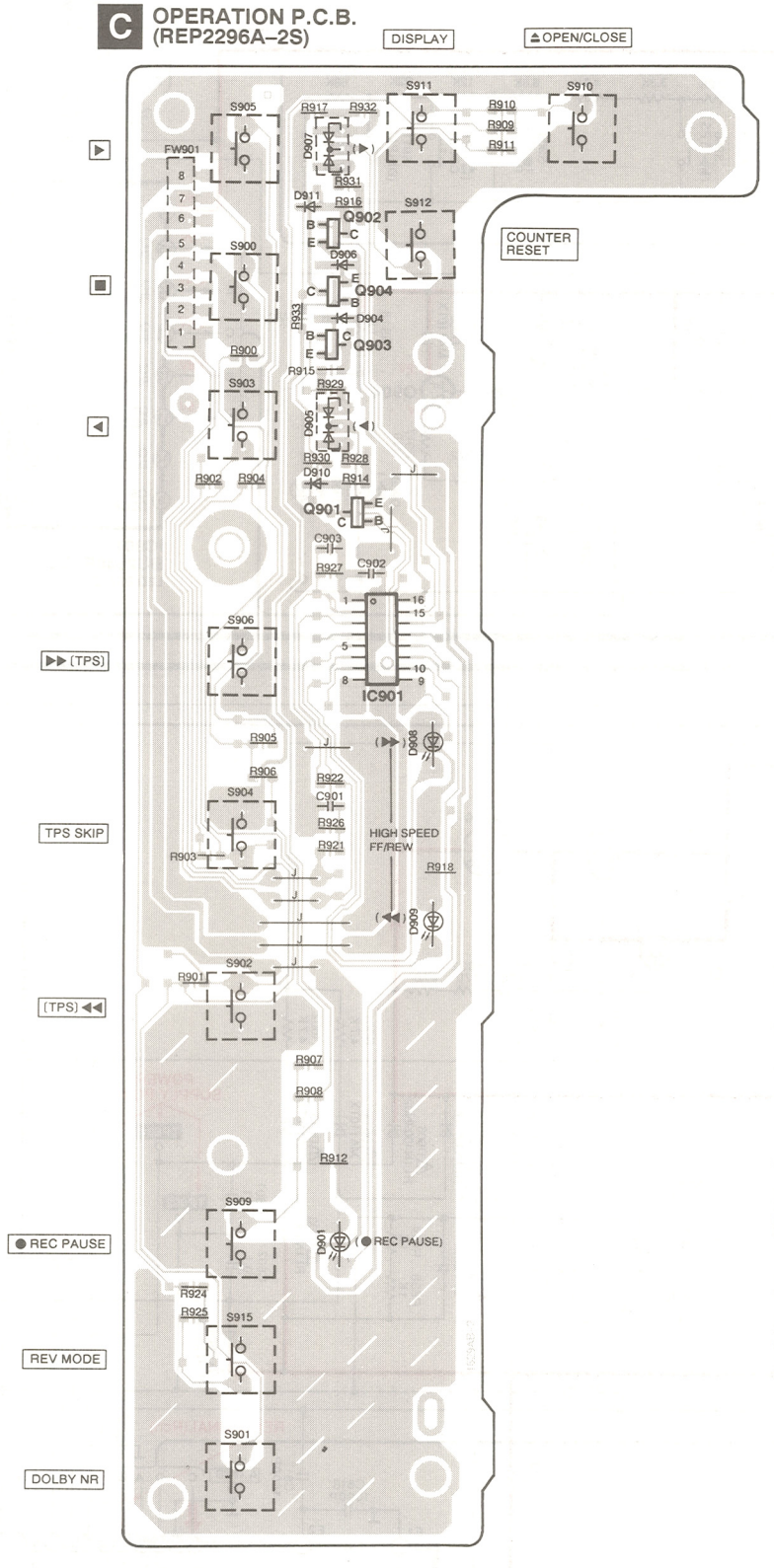




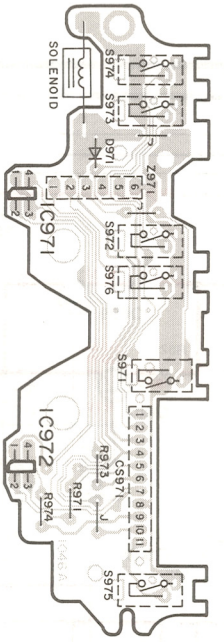
■PRINTED CIRCUIT BOARD DIAGRAM

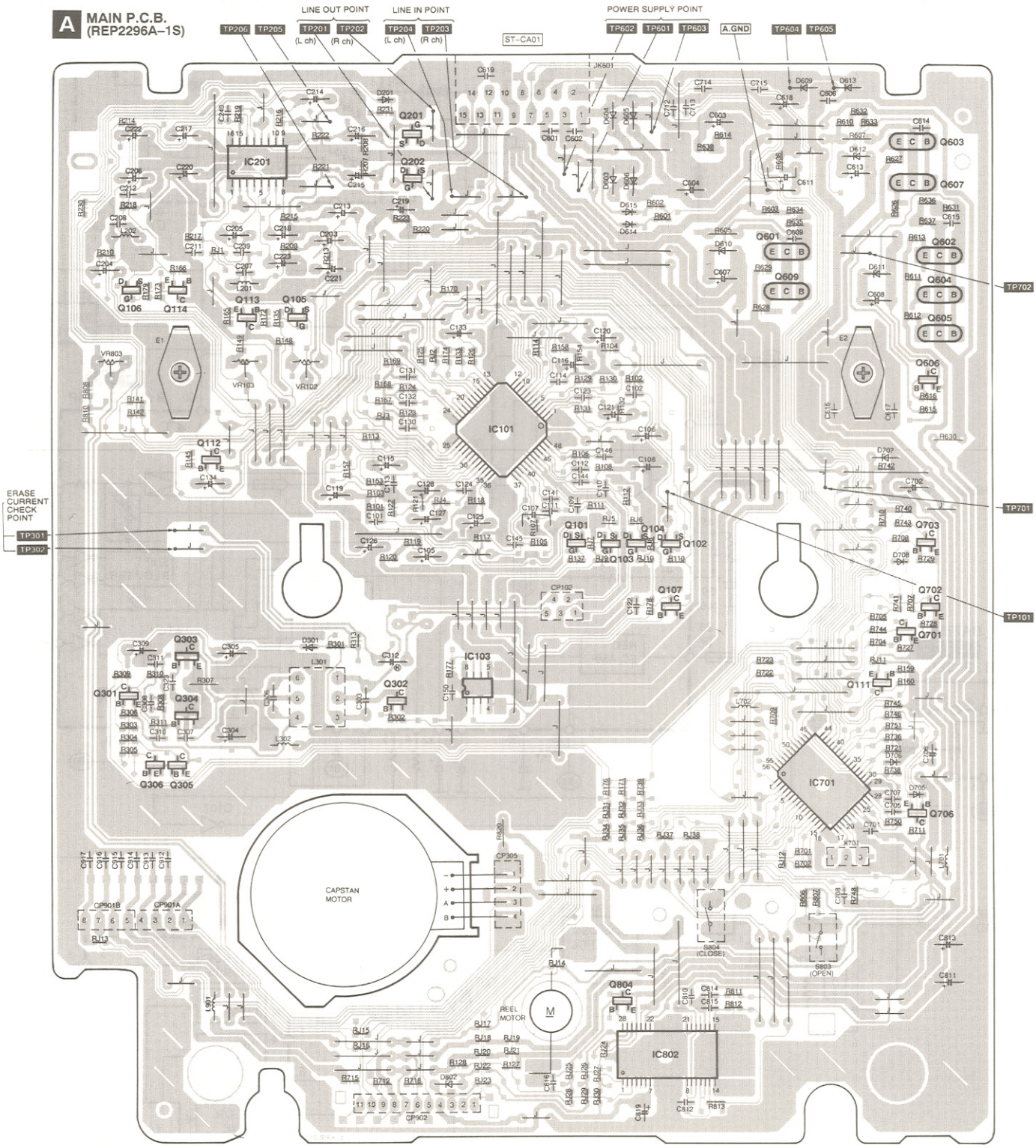
(This schematic diagram may be modified at any time with the development of new technology.)

C OPERATION P.C.B. (REP2296A–2S)

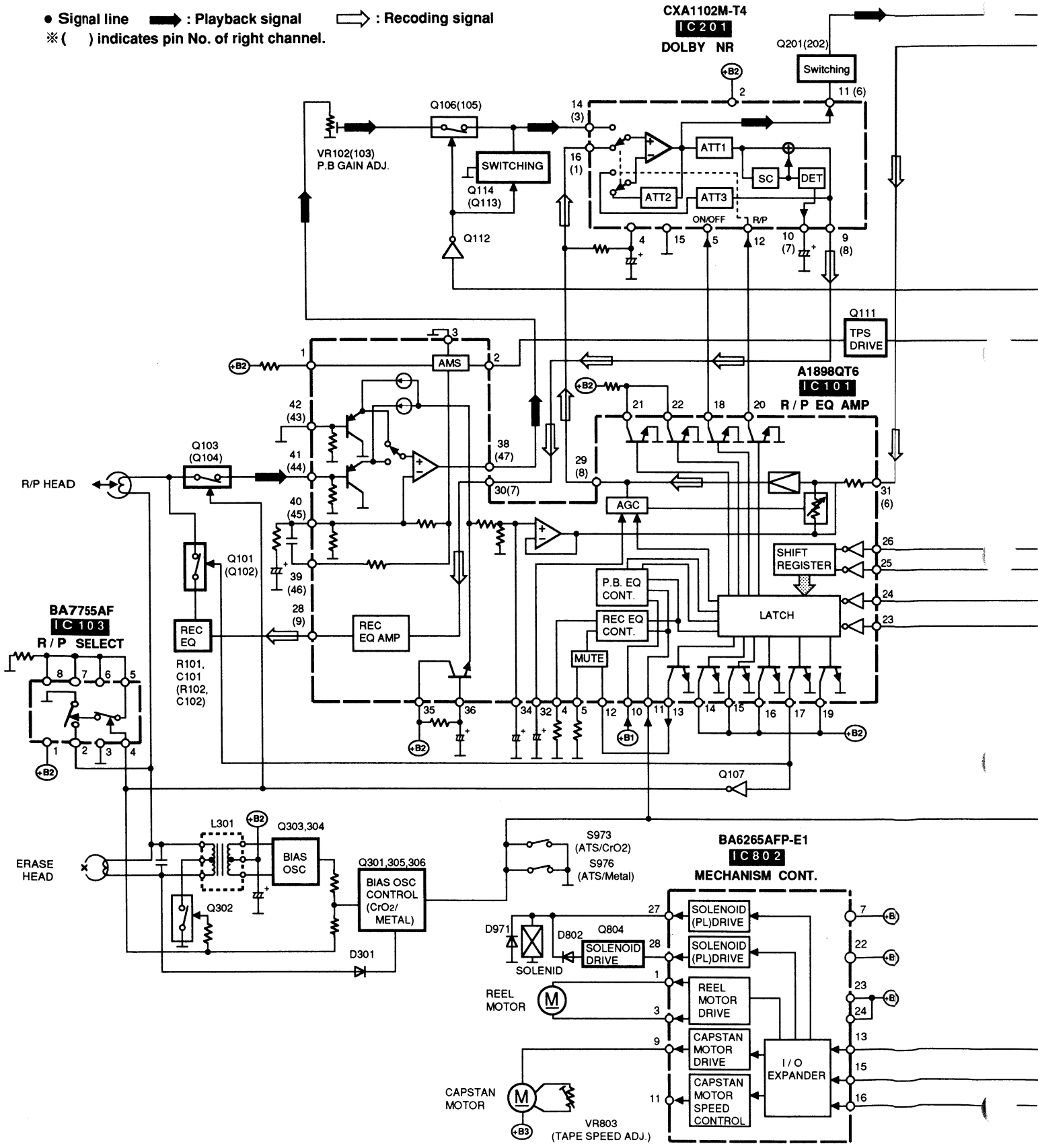


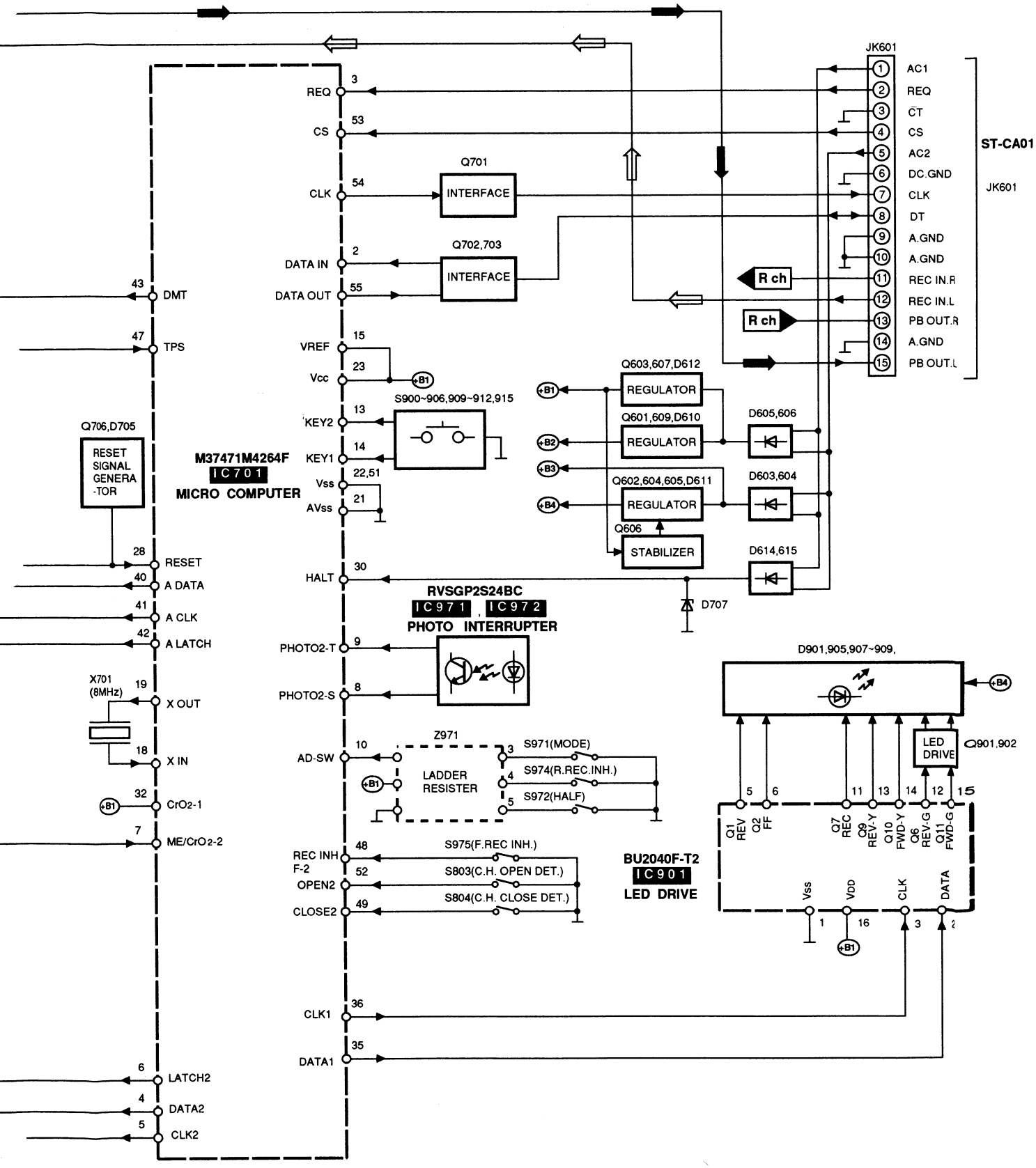
B MECHANISM P.C.B. (REP1656A)




A MAIN P.C.B. (REP2296A–1S)
LINE OUT POINT
LINE IN POINT
POWER SUPPLY POINT
TP206 TP205 TP201 (L ch) TP202 (R ch) TP204 (L ch) TP203 (R ch) ST-CA01 TP602 TP601 TP603 A.GND TP604 TP605
JK601
IC201
IC101
IC103
IC701
IC802
Q201
Q202
Q106 Q114
Q113 Q105
Q112
Q603
Q607
Q601
Q602
Q609
Q604
Q605
Q606
Q101 Q104 Q102 Q103
Q107
Q303
Q301
Q304
Q306 Q305
Q302
Q111
Q703
Q702
Q701
Q706
Q804
TP702
TP701
TP101
ERASE CURRENT CHECK POINT
TP301
TP302
CAPSTAN MOTOR
REEL MOTOR
S804 (CLOSE)
S803 (OPEN)

■BLOCK DIAGRAM




JK601
AC1
REQ
CT
CS
AC2
DC.GND
CLK
DT
A.GND
A.GND
REC IN.R
REC IN.L
PB OUT.R
A.GND
PB OUT.L
ST-CA01
JK601
R ch
R ch
REQ
CS
CLK
DATA IN
DATA OUT
Q701
INTERFACE
Q702,703
INTERFACE
DMT
TPS
VREF
Vcc
KEY2
KEY1
Vss
AVss
S900~906,909~912,915
Q603,607,D612
REGULATOR
Q601,609,D610
REGULATOR
Q602,604,605,D611
REGULATOR
Q606
STABILIZER
D605,606
D603,604
D614,615
D707
Q706,D705
RESET SIGNAL GENERA -TOR
M37471M4264F
IC701
MICRO COMPUTER
RESET
A DATA
A CLK
A LATCH
HALT
RVSGP2S24BC
IC971 , IC972
PHOTO INTERRUPTER
PHOTO2-T
PHOTO2-S
X701 (8MHz)
X OUT
X IN
CrO2-1
ME/CrO2-2
AD-SW
Z971
LADDER RESISTER
S971(MODE)
S974(R.REC.INH.)
S972(HALF)
REC INH
F-2
OPEN2
CLOSE2
S975(F.REC INH.)
S803(C.H. OPEN DET.)
S804(C.H. CLOSE DET.)
BU2040F-T2
IC901
LED DRIVE
D901,905,907~909,
LED DRIVE
Q901,902
Q1 REV
Q2 FF
Q7 REC
Q9 REV-Y
Q10 FWD-Y
Q6 REV-G
Q11 FWD-G
Vss
VDD
CLK
DATA
CLK1
DATA1
LATCH2
DATA2
CLK2

■TERMINAL GUIDE

• IC701 (M37471M4264F): MICRO COMPUTER

Pin No.	Mark	I/O	Function
1	NC	–	Not used
2	DATA IN	I	Serial data input
3	REQ	I	Request signal input
4	DATA2	O	Mechanism control data output
5	CLK2	O	Mechanism control clock output
6	LATCH2	O	Mechanism control latch signal output
7	ME/CrO2-2	I	Tape select switch input
8	PHOTO2_S	I	Reverse side reel pulse input
9	PHOTO2_T	I	Forward side reel pulse input
10	AD_SW	I	Mechanism switch signal input
11	PHOTO1_S	I	Reverse side reel pulse input
12	PHOTO2_T	I	Forward side reel pulse input
13	KEY2	I	Key switch signal input
14	KEY1	I	
15	VREF	I	Reference voltage input
16	NC	–	Not used
17	NC	–	Not used
18	XIN	I	Clock input
19	XOUT	O	Clock output
20	NC	–	Not used
21	AVSS	–	Connect to GND
22	VSS	–	Connect to GND
23	VCC	–	Power supply (+5V)
24	NC	–	Not used
25	TEST	I	Test mode select (Not used, open)
26	CP_SEL1	–	Not used
27	NC	–	Not used
28	RESET	I	Reset signal input

Pin No.	Mark	I/O	Function
29	NC	–	Not used
30	HALT	I	AC power source detect signal input
31	MODE1	I	Mode detect switch signal input
32	CrO2-1	I	Tape select switch signal input
33	HALF1	I	Half detect switch signal input
34	NC	–	Not used
35	DATA1	O	Control data output
36	CLK1	O	Control clock output
37	LATCH1	O	Mechanism control latch signal output
38	CLOSE1	I	Cassette holder close detect switch signal input
39	OPEN1	I	Cassette holder open detect switch signal input
40	A DATA	O	Serial data output
41	A CLK	O	Serial clock output
42	A LATCH	O	Latch signal output
43	DMT	O	Muting control signal output
44	NC	–	Not used
45	NC	–	Not used
46	CP_SEL2	–	Not used
47	TPS	I	TPS signal input
48	RECINH F_2	I	Record prevention tab detect switch signal input
49	CLOSE2	I	Cassette holder close detect switch signal input
50	NC	–	Not used
51	VSS	–	GND terminal
52	OPEN2	I	Cassette holder open detect switch signal input
53	CS	I	Serial data control signal input
54	CLK	O	Serial clock output
55	DATA OUT	O	Serial data output
56	NC	–	Not used

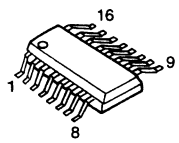
• IC802 (BA6265AFP-E1): MECHANISM CONTROL

Pin No.	Mark	I/O	Function
1	RM(−)	O	Reel motor drive (−) output terminal
2	RNF	–	GND terminal
3	RM(+)	O	Reel motor drive (+) output terminal
4	NC	–	Not used, connected to GND
5	NC		
6	NC		
7	VCC2	I	Power supply terminal
8	CPM GND	–	GND terminal
9	CPM	O	Capstan motor drive output terminal
10	NC	–	Not used, connected to pin11
11	CPM SW	O	Capstan speed select SW output terminal
12	NC	–	Not used, connected to pin 11
13	LATCH	I	I/O expander latch signal input terminal
14	S0	O	I/O expander serial output terminal

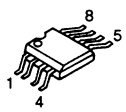
Pin No.	Mark	I/O	Function
15	DATA	I	I/O expander data signal input terminal
16	CLK	I	I/O expander clock signal input terminal
17	NC	–	Not used, connected to GND
18	NC	–	
19	NC	–	Not used, connected to pin 9
20	GND	–	GND terminal
21	GND	–	GND terminal
22	VCC1	I	Power supply terminal
23	VCC3	I	Power supply terminal
24	VCC3	I	Power supply terminal
25	NC	–	Not used, connected to power supply
26	GND	–	Gnd terminal
27	PL 15V	O	Plunger output terminal(15V)
28	PL 7.5V	O	Plunger output terminal(7.5V)

• Terminal guide of IC's, transistors and diodes

CXA1102M-T4
BU2040F-T2



BA7755AF



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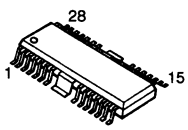

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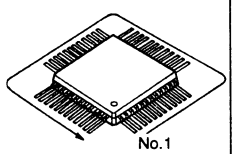
M37471M4264F	56PIN



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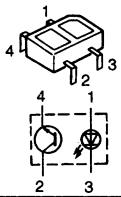

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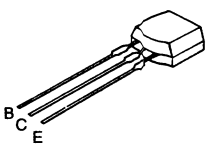

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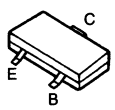
2SD1328RSTTX
2SD601QRSTX
UN5214TX



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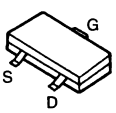

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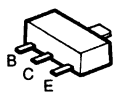

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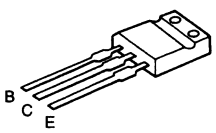

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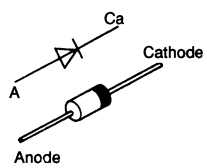

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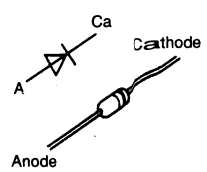

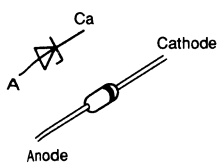

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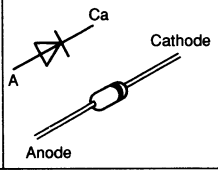
MTZJ5R1BTA
MTZJ5R6BTA
MTZJ8R2CTA

MA723TA
RVD1SS133TA



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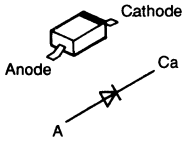

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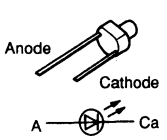

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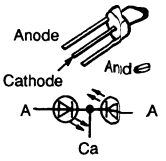
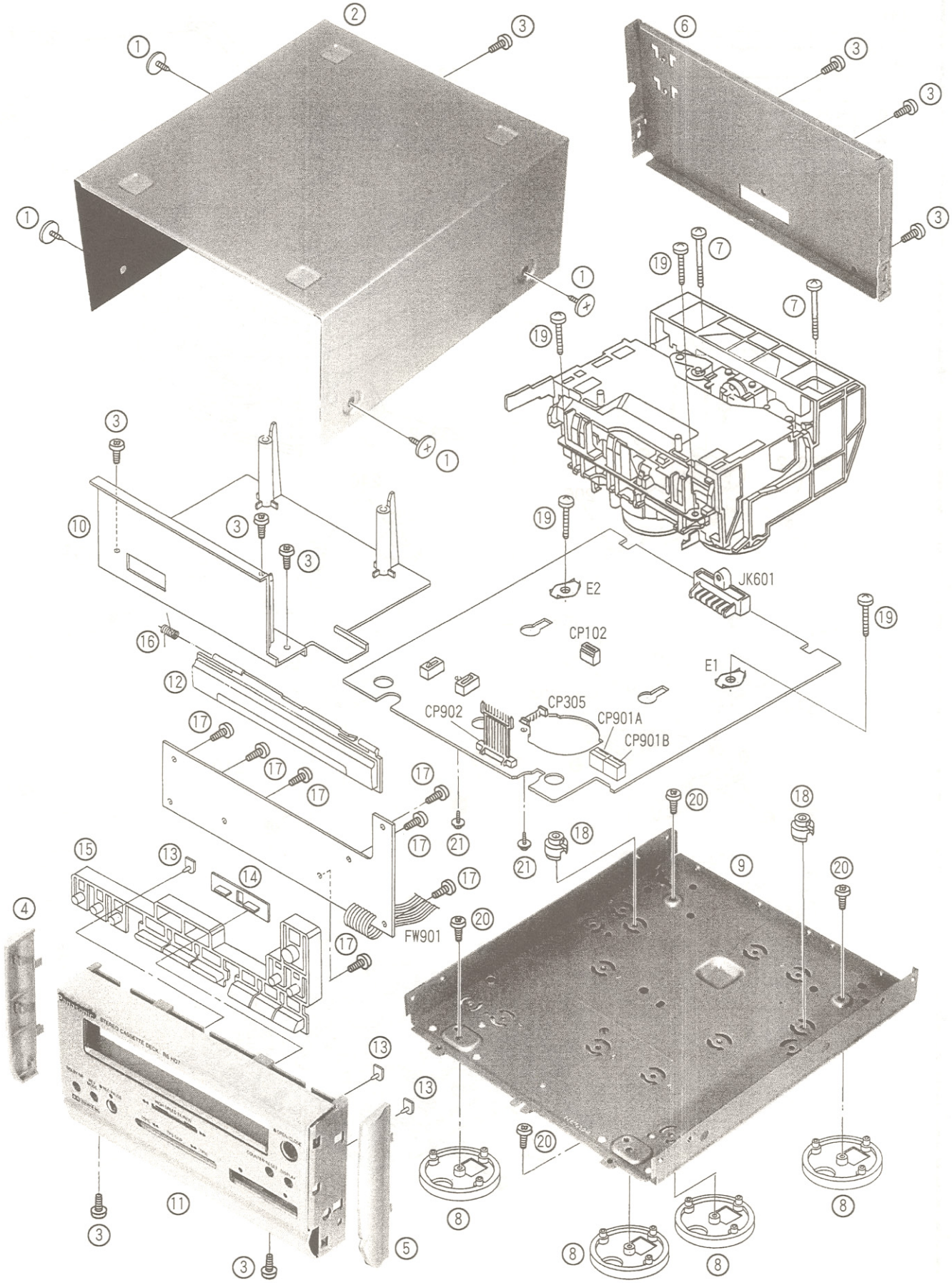


■REPLACEMENT PARTS LIST

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	RHD30007-S	SCREW	
2	RKM0326B-S	CABINET	
3	XTBS3+8JFZ1	SCREW	
4	RGK0812-S	SIDE ORNAMENT(L)	
5	RGK0813-S	SIDE ORNAMENT(R)	
6	RGR0240A-C	BACK PLATE	
7	RHD30069	SCREW	
8	RKA0076-N1	FOOT	
9	RMK0324	BOTTOM CHASSIS	
10	RMK0321	MECHANISM BASE	
11	RFKGSCA01E-N	FRONT PANEL ASS'Y	
12	RFKRSHD7-N	CASSETTE DOOR ASS'Y	
13	RGL0331-Q2	PANEL LIGHT(A)	
14	RGL0332-Q1	PANEL LIGHT(B)	
15	RGU1391-S	OPERATION BUTTON	
16	RMB0478	CASSETTE DOOR SPRING	
17	XTBS26+8J	SCREW	
18	SHE170-2	P.C.B.SUPPORT	
19	XTB3+12JFZ	SCREW	
20	XTB3+6G	SCREW	
21	XTW2+6S	SCREW	
		MECHANISM PARTS	
201	RXF0045	FLYWHEEL(F) ASS'Y	
201-1	RMQ0420	WASHER	
202	RXF0046	FLYWHEEL(R) ASS'Y	
202-1	RMQ0421	WASHER	
203	RML0272	SWITCH LEVER	
204	RXQ0265	HEAD P.C.B.ASS'Y	
204-1	RMB0266-1	FWD/REV ROD SPRING	
204-2	RXM0036	FWD/REV ROD	
206	RFKRSTR979	HEAD BLOCK ASS'Y(REC/P.B.)	
206-1	RHD17015	AZIMUTH SCREW	
206-2	RMB0352-1	HEAD HOLD SPRING	
206-3	RMQ0360A	CONNECTOR HOLDER	
207	RDV108ZA	BELT	
208	RDK0019A-1J	MAIN GEAR	
209	RMB0261	HEAD P.C.B.RETURN SPRING	
210	RMB0262	BRAKE ROD RETURN SPRING	
211	RMB0263	SPRING(F)	
212	RMB0264	SPRING(R)	
213	RUW147ZA	TRIGGER LEVER SPRING	
214	RML0267A	TRIGGER LEVER	
215	RML0268A	FWD/REV LEVER	
216	RMM0091A	BRAKE ROD	
217	RMS0398-1	MOVING IRON CORE	
218	RSJ0003	SOLENOID	
219	RUS609ZC	CASSETTE HOLD SPRING	

Ref. No.	Part No.	Part Name & Description	Remarks
220	RXG0036	REEL TABLE GEAR	
221	RXL0106	IDLER GEAR	
222	RXP0052	PINCH ROLLER(F) ASS'Y	
222-1	RMB0259	PINCH ROLLER(F) SPRING	
223	RXP0053	PINCH ROLLER(R) ASS'Y	
223-1	RMB0260	PINCH ROLLER(R) SPRING	
224	RDG0206A-1	LOADING GEAR	
225	RDG0209A	INTERMEDIATE GEAR	
226	REM0036-1	CAPSTAN MOTOR ASS'Y	
227	REM0043	REEL MOTOR ASS'Y	
228	RHD26013	SCREW	
229	RMQ0537	DRIVE GEAR	
230	RMQ0314A	SPACER	
231	RXG0037	FRICTION GEAR ASS'Y	
232	RMQ0536	DRIVE RACK	
233	RYF0334A-K	CASSETTE HOLDER ASS'Y	
233-1	RMC0310	CASSETTE HOLD SPRING	
233-2	RMB0397	HOLDER SPRING	
234	RFKJSCA7NB	MAIN CHASSIS ASS'Y	
235	RFKJSCA7NA	SUB CHASSIS ASS'Y	
236	XTW26+6L	SCREW	
237	RMB0268	HOLDER HOOK SPRING	
238	RML0271A	HOLDER HOOK LEVER	
239	XTW2+6S	SCREW	
240	RXR0018	REEL TABLE	
241	XTW2+5L	SCREW	
242	XTW26+12S	SCREW	

■CABINET PARTS LOCATION

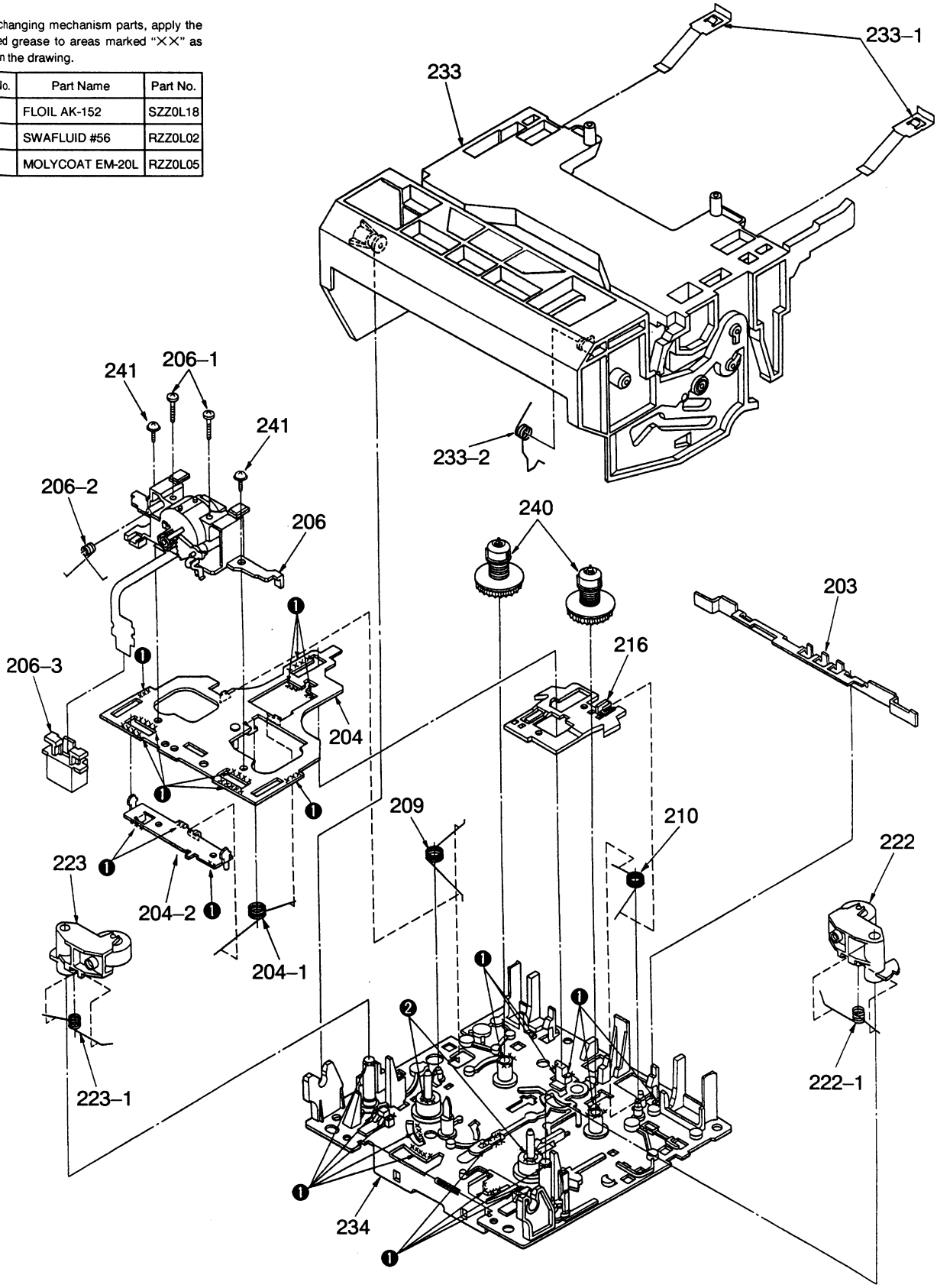


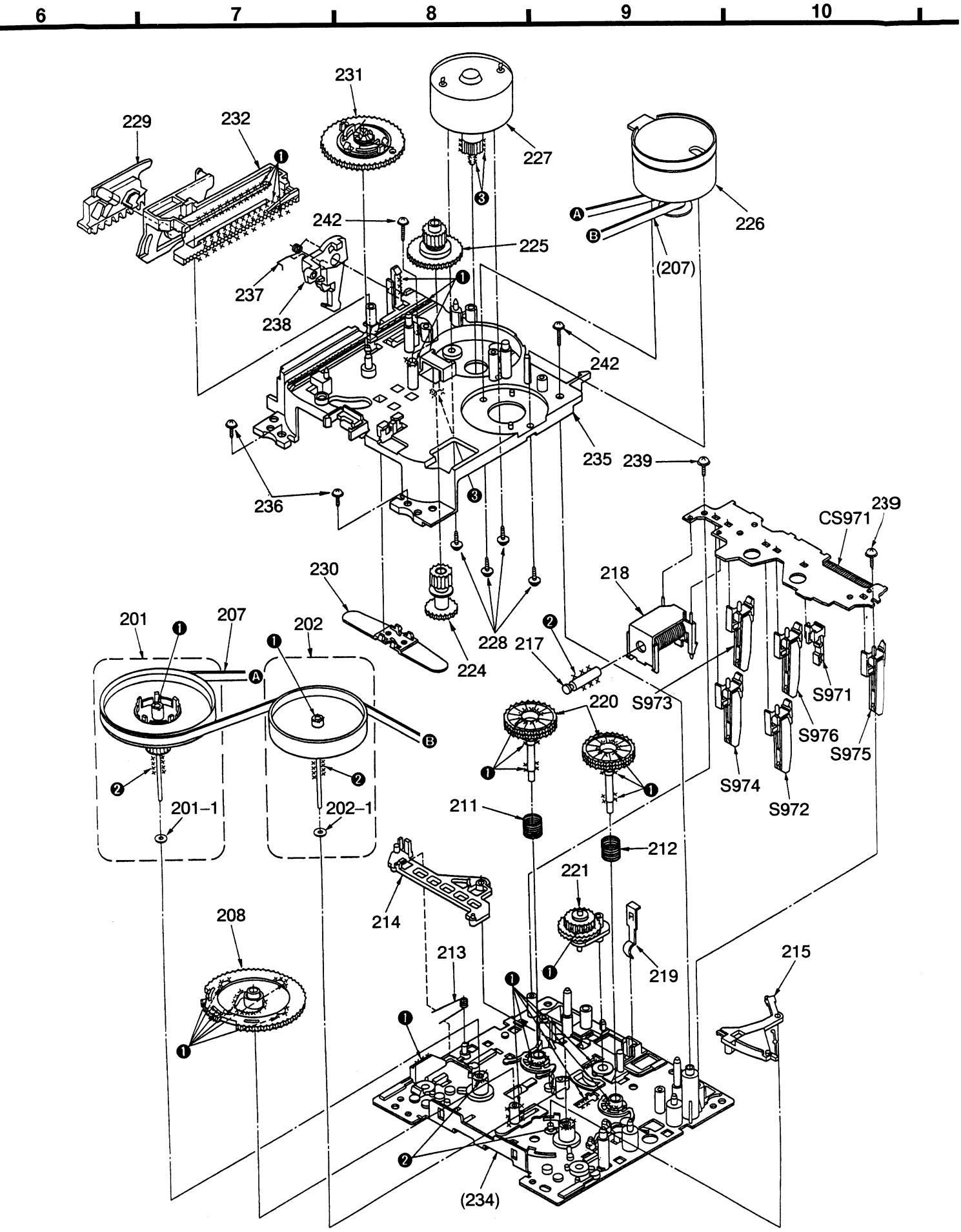
■MECHANISM PARTS LOCATION

Note:

When changing mechanism parts, apply the specified grease to areas marked "××" as shownin the drawing.

Ref. No.	Part Name	Part No.
❶	FLOIL AK-152	SZZ0L18
❷	SWAFLUID #56	RZZ0L02
❸	MOLYCOAT EM-20L	RZZ0L05

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(207)
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239
CS971
230
218
228
217
224
201
207
202
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S973
S971
S976
S975
S974
S972
201–1
202–1
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212
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215
(234)

■RESISTORS AND CAPACITORS

Notes: * Capacity values are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
* Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000k (OHM)

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R101, 102	ERJ6GEYJ682V	1/10W 6.8K
R103, 104	ERJ6GEYJ104V	1/10W 100K
R105, 106	ERJ6GEYJ102V	1/10W 1K
R107, 108	ERJ6GEYJ820V	1/10W 82
R110	ERJ6GEYJ334V	1/10W 330K
R111, 112	ERJ6GEYJ101V	1/10W 100
R113, 114	ERJ6GEYJ103V	1/10W 10K
R117	ERJ6GEYJ123V	1/10W 12K
R118	ERJ6GEYJ102V	1/10W 1K
R119, 120	ERJ6GEYJ330V	1/10W 33
R121, 122	ERJ6GEYJ225V	1/10W 2.2M
R123-126	ERJ6GEYJ104V	1/10W 100K
R127, 128	ERJ6GEYJ222V	1/10W 2.2K
R129, 130	ERJ6GEYJ273V	1/10W 27K
R131	ERJ6GEYJ562V	1/10W 5.6K
R132	ERJ6GEYJ104V	1/10W 100K
R133	ERJ6GEYJ103V	1/10W 10K
R135	ERJ6GEYJ334V	1/10W 330K
R137	ERJ6GEYJ334V	1/10W 330K
R141, 142	ERJ6GEYJ103V	1/10W 10K
R145	ERJ6GEYJ183V	1/10W 18K
R148, 149	ERJ6GEYJ562V	1/10W 5.6K
R153, 154	ERJ6GEYJ102V	1/10W 1K
R157, 158	ERJ6GEYJ223V	1/10W 22K
R159	ERJ6GEYJ104V	1/10W 100K
R160	ERJ6GEYJ103V	1/10W 10K
R165, 166	ERJ6GEYJ104V	1/10W 100K
R167-169	ERJ6GEYJ222V	1/10W 2.2K
R170	ERJ6GEYJ472V	1/10W 4.7K
R171	ERJ6GEYJ682V	1/10W 6.8K
R172, 173	ERJ6GEYJ122V	1/10W 1.2K
R174	ERJ6GEYJ103V	1/10W 10K
R176	ERJ6GEYJ392V	1/10W 3.9K
R177	ERJ6GEYJ273V	1/10W 27K
R178, 179	ERJ6GEYJ334V	1/10W 330K
R207, 208	ERJ6GEYJ104V	1/10W 100K
R209, 210	ERJ6GEYJ102V	1/10W 1K
R213, 214	ERJ6GEYJ332V	1/10W 3.3K
R215, 216	ERJ6GEYJ123V	1/10W 12K
R217, 218	ERJ6GEYJ222V	1/10W 2.2K
R219	ERJ6GEYJ433V	1/10W 43K
R220	ERJ6GEYJ220	1/10W 22
R221, 222	ERJ6GEYJ221V	1/10W 220
R223	ERJ6GEYJ220	1/10W 22
R230	ERJ6GEYJ103V	1/10W 10K
R231	ERJ6GEYJ334V	1/10W 330K

Ref. No.	Part No.	Values & Remarks
R301	ERJ6GEYJ103V	1/10W 10K
R302	ERJ6GEYJ182V	1/10W 1.8K
R303	ERJ6GEYJ682V	1/10W 6.8K
R304	ERJ6GEYJ223V	1/10W 22K
R305	ERJ6GEYJ123V	1/10W 12K
R306	ERJ6GEYJ223V	1/10W 22K
R307	ERDS1FVJ2R2T	1/2W 2.2 ⚠
R308	ERJ6GEYJ102V	1/10W 1K
R309-311	ERJ6GEYJ472V	1/10W 4.7K
R313	ERJ6GEYJ1R0V	1/10W 1.0
R601, 602	ERJ6GEYJ472V	1/10W 4.7K
R603	ERJ6GEYJ820V	1/10W 82
R605	ERD2FCVJ4R7T	1/4W 4.7 ⚠
R607	ERD2FCVG100T	1/4W 10 ⚠
R608	ERJ6GEYJ100	1/10W 10
R610	ERJ6GEYJ471V	1/10W 470
R611-613	ERJ6GEYJ1R0V	1/10W 1.0
R614	ERJ6GEYJ102V	1/10W 1K
R615	ERJ6GEYJ332V	1/10W 3.3K
R616	ERJ6GEYJ103V	1/10W 10K
R626-629	ERJ6GEYJ1R0V	1/10W 1.0
R630	ERDS2TJ1R0	1/4W 1.0
R631	ERJ6GEYJ181V	1/10W 180
R632, 633	ERJ6GEYJ471V	1/10W 470
R634, 635	ERJ6GEYJ820V	1/10W 82
R636, 637	ERJ6GEYJ181V	1/10W 180
R638	ERJ6GEYJ102V	1/10W 1K
R701, 702	ERJ6GEYJ103V	1/10W 10K
R704	ERJ6GEYJ472V	1/10W 4.7K
R705	ERJ6GEYJ473V	1/10W 47K
R707, 708	ERJ6GEYJ472V	1/10W 4.7K
R709	ERJ6GEYJ101V	1/10W 100
R710	ERJ6GEYJ102V	1/10W 1K
R711	ERJ6GEYJ104V	1/10W 100K
R712	ERJ6GEYJ683V	1/10W 68K
R715	ERJ6GEYJ472V	1/10W 4.7K
R718	ERJ6GEYJ683V	1/10W 68K
R721	ERJ6GEYJ103V	1/10W 10K
R722, 723	ERJ6GEYJ102V	1/10W 1K
R727-729	ERJ6GEYJ472V	1/10W 4.7K
R736	ERJ6GEYJ103V	1/10W 10K
R738	ERJ6GEYJ102V	1/10W 1K
R739	ERJ6GEYJ272V	1/10W 2.7K
R740	ERJ6GEYJ473V	1/10W 47K
R741	ERJ6GEYJ123V	1/10W 12K
R742	ERJ6GEYJ103V	1/10W 10K
R743, 744	ERJ6GEYJ102V	1/10W 1K
R745, 746	ERJ6GEYJ103V	1/10W 10K
R748	ERJ6GEYJ103V	1/10W 10K

Ref. No.	Part No.	Values & Remarks
R750	ERJ6GEYJ103V	1/10W 10K
R751	ERJ6GEYJ104V	1/10W 100K
R806, 807	ERJ6GEYJ103V	1/10W 10K
R808	ERJ6GEYJ392V	1/10W 3.9K
R810	ERJ6GEYJ103V	1/10W 10K
R811-813	ERJ6GEYJ272V	1/10W 2.7K
R820	ERDS2TJ2R2T	1/4W 2.2
R900	ERJ6GEYJ821V	1/10W 820
R901	ERJ6GEYJ102V	1/10W 1K
R902	ERJ6GEYJ122V	1/10W 1.2K
R903	ERJ6GEYJ152V	1/10W 1.5K
R904	ERJ6GEYJ182V	1/10W 1.8K
R905	ERJ6GEYJ222V	1/10W 2.2K
R906	ERJ6GEYJ332V	1/10W 3.3K
R907	ERJ6GEYJ472V	1/10W 4.7K
R908	ERJ6GEYJ682V	1/10W 6.8K
R909	ERJ6GEYJ123V	1/10W 12K
R910	ERJ6GEYJ223V	1/10W 22K
R911	ERJ6GEYJ683V	1/10W 68K
R912	ERJ6GEYJ102V	1/10W 1K
R914	ERJ6GEYJ151V	1/10W 150
R915	ERJ6GEYJ121V	1/10W 120
R916	ERJ6GEYJ151V	1/10W 150
R917	ERJ6GEYJ121V	1/10W 120
R918	ERJ6GEYJ102V	1/10W 1K
R921, 922	ERJ6GEYJ101V	1/10W 100
R924	ERJ6GEYJ821V	1/10W 820
R925	ERJ6GEYJ102V	1/10W 1K
R926, 927	ERJ6GEYJ473V	1/10W 47K
R928	ERJ6GEYJ151V	1/10W 150
R929	ERJ6GEYJ121V	1/10W 120
R930	ERJ6GEYJ103V	1/10W 10K
R931	ERJ6GEYJ151V	1/10W 150
R932	ERJ6GEYJ121V	1/10W 120
R933	ERJ6GEYJ103V	1/10W 10K
R971	ERDS2TJ221	1/4W 220
R973, 974	ERDS2TJ393	1/4W 39K
		CHIP JUMPER(S)
RJ1-38	ERJ6GEY0R00V	CHIP JUMPER
		CAPACITORS
C101, 102	ECUV1H221KBN	50V 220P
C105, 106	ECEA1EKA4R7B	25V 4.7U
C107, 108	ECEA0JKA470B	6.3V 47U
C109, 110	ECUV1H561KBN	50V 560P
C111, 112	ECUV1E183KBN	25V 0.018U

Ref. No.	Part No.	Values & Remarks
C113, 114	ECUV1H331KBN	50V 330P
C115, 116	ECEA1EKA4R7B	25V 4.7U
C119, 120	ECEA1EKA4R7B	25V 4.7U
C121	ECEA1HKAR33B	50V 0.33U
C122	ECUV1E223KBN	25V 0.022U
C123	ECUV1E153KBN	25V 0.015U
C124	ECUV1H102KBN	50V 1000P
C125	ECEA1AKA220B	10V 22U
C126	RCE1AKA101BG	10V 100U
C127	RCE1CKA100BG	16V 10U
C128	ECEA0JKA470B	6.3V 47U
C130-132	ECUV1H331KBN	50V 330P
C133	ECEA1HKA010B	50V 1U
C134	RCE1HKA3R3BG	50V 3.3U
C141	ECUV1H471KBN	50V 470P
C144	ECUV1H471KBN	50V 470P
C145, 146	ECUV1H332KBN	50V 3300P
C150	ECUV1E104ZFN	25V 0.1U
C203, 204	ECEA1EKA4R7B	25V 4.7U
C205, 206	ECEA1HKA010B	50V 1U
C207, 208	ECUV1H820JCN	50V 82P
C211, 212	ECUV1H152KBN	50V 1500P
C213, 214	ECEA1EKA4R7B	25V 4.7U
C215, 216	RCE1CKA100BG	16V 10U
C217, 218	ECEA1HKAR68B	50V 0.68U
C219	ECEA1CKA101B	16V 100U
C220	ECA1AM471B	10V 470U
C221, 222	ECEA1HKAR68B	50V 0.68U
C223	RCE1CKA100BG	16V 10U
C239, 240	ECUV1H681KBN	50V 680P
C303	ECQP2E472JZT	250V 4700P
C304	RCE1AKA101BG	10V 100U
C305	ECEA1HKA0R1B	50V 0.1U
C306	ECQB1H393JF3	50V 0.039U
C307	ECUV1H102KBN	50V 1000P
C308	ECUV1H332KBN	50V 3300P
C309	ECEA0JKA470B	6.3V 47U
C310, 311	ECUV1H103KBN	50V 0.01U
C312	ECEA1HKN2R2B	50V 2.2U
C323	ECUV1H102KBN	50V 1000P
C601, 602	ECUV1E104ZFN	25V 0.1U
C603	ECA1EM222E	25V 2200U ⚠
C604	ECA1EM102B	25V 1000U ⚠
C606	ECUV1E104ZFN	25V 0.1U
C607	ECA1AM471B	10V 470U
C608	RCE1AKA101BG	10V 100U
C609	ECUV1H103KBN	50V 0.01U
C611	ECEA1HKA010B	50V 1U
C613	RCE1AKA470BG	10V 47U
C614, 615	ECUV1H103KBN	50V 0.01U
C616, 617	ECUV1H102KBN	50V 1000P
C618	RCE1CKA100BG	16V 10U

Ref. No.	Part No.	Values & Remarks
C619	ECUV1H102KBN	50V 1000P
C701	ECUV1E104ZFN	25V 0.1U
C702	ECEA0JKA101B	6.3V 100U
C705	ECUV1H103KBN	50V 0.01U
C706	ECST0JY335RR	6.3V 3.3U
C707, 708	ECUV1H103KBN	50V 0.01U
C712-715	ECUV1H101KCN	50V 100P
C810	ECUV1E104ZFN	25V 0.1U
C811	ECEA1EKA470B	25V 47U
C812	ECUV1H101KCN	50V 100P
C813	RCE1AKA101BG	10V 100U
C814, 815	ECUV1H101KCN	50V 100P
C816	ECUV1E104ZFN	25V 0.1U
C819	ECST1AX106RR	10V 10U
C901	ECUV1H101KCN	50V 100P
C902	ECUV1E104ZFN	25V 0.1U
C903	ECUV1H101KCN	50V 100P
C912-917	ECUV1H101KCN	50V 100P

■REPLACEMENT PARTS LIST

Notes: * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Ref. No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUIT(S)	
IC101	A1898QT6	R/P EQ AMP	
IC103	BA7755AF	R/P SELECT	
IC201	CXA1102M-T4	DOLBY NR	
IC701	M37471M4264F	MICRO COMPUTER	
IC802	BA6265AFP-E1	MECHANISM CONTROL	
IC901	BU2040F-T2	LED DRIVE	
IC971, 972	RVSGP2S24BC	PHOTO INTERRUPTER	
		TRANSISTOR(S)	
Q101-106	2SJ163PQRTX	TRANSISTOR	
Q107	DTA114EUT107	TRANSISTOR	
Q111	2SD601QRSTX	TRANSISTOR	
Q112	DTA114EUT107	TRANSISTOR	
Q113, 114	2SD1328QRSTX	TRANSISTOR	
Q201, 202	2SJ163PQRTX	TRANSISTOR	
Q301	2SD601QRSTX	TRANSISTOR	
Q302	2SD1328QRSTX	TRANSISTOR	
Q303, 304	2SD874QRSTX	TRANSISTOR	
Q305, 306	DTC144EUT107	TRANSISTOR	
Q601-605	2SD2137PQTA	TRANSISTOR	⚠
Q606	2SD601QRSTX	TRANSISTOR	
Q607	2SD2137PQTA	TRANSISTOR	⚠
Q609	2SD2137PQTA	TRANSISTOR	⚠
Q701-703	2SD601QRSTX	TRANSISTOR	
Q706	UN5214TX	TRANSISTOR	
Q804	2SD1328QRSTX	TRANSISTOR	
Q901, 902	DTA114EUT107	TRANSISTOR	
Q903, 904	2SB709QRSTX	TRANSISTOR	
		DIODE(S)	
D201	MA110TX	DIODE	
D301	MA110TX	DIODE	
D603-606	RL1N4003N02	DIODE	⚠
D609	MA723TA	DIODE	
D610	MTZJ10BTA	DIODE	⚠
D611	MTZJ8R2CTA	DIODE	⚠
D612	MTZJ5R6BTA	DIODE	⚠
D613	MA723TA	DIODE	
D614, 615	MA110TX	DIODE	⚠
D705, 706	MA110TX	DIODE	
D707	MTZJ5R1BTA	DIODE	⚠
D708	MA110TX	DIODE	

Ref. No.	Part No.	Part Name & Description	Remarks
D802	MA188TA	DIODE	
D901	SLR-305VC	L. E. D.	
D904	MA110TX	DIODE	
D905	SPR-305MDTF	L. E. D.	
D906	MA110TX	DIODE	
D907	SPR-305MDTF	L. E. D.	
D908, 909	SLR-305VC	L. E. D.	
D910, 911	MA110TX	DIODE	
D971	RVD1SS133TA	DIODE	
		VARIABLE RESISTOR(S)	
VR102	EVNDXAA00B24	P. B. GAIN ADJ. (L)	
VR103	EVNDXAA00B24	P. B. GAIN ADJ. (R)	
VR803	EVNDXAA00B53	TAPE SPEED ADJ.	
		COIL(S)	
L201, 202	SLQX303-1KT	COIL	
L301	RL08C006M-T	COIL	
L302	RLQZB470KT-D	COIL	
L701	RLQA100JT-Y	COIL	
L702	RLQZP1R0KT-Y	COIL	
L901	RLQA100JT-Y	COIL	
		OSCILLATOR(S)	
X701	EF0EC8004T4	OSCILLATOR(8MHz)	
		COMPONENT COMBINATION(S)	
Z971	EXBF6L306SYV	COMPONENT COMBINATION	
		SWITCH(ES)	
S803	RSH1A024-U	OPEN DET.	
S804	RSH1A024-U	CLOSE DET.	
S900	EVQ21405R	STOP	
S901	EVQ21405R	DOLBY NR	
S902	EVQ21405R	REW(TPS)	
S903	EVQ21405R	R. PLAY	
S904	EVQ21405R	TPS. SKIP	
S905	EVQ21405R	F. PLAY	
S906	EVQ21405R	F. F. (TPS)	
S909	EVQ21405R	REC PAUSE	
S910	EVQ21405R	OPEN/CLOSE	
S911	EVQ21405R	DISPLAY(COUNTER)	

Ref. No.	Part No.	Part Name & Description	Remarks
S912	EVQ21405R	RESET(COUNTER)	
S915	EVQ21405R	REV MODE	
S971	RSH1A018-1U	MODE DET.	
S972	RSH1A019-2U	HALF DET.	
S973	RSH1A019-2U	ATS/CrO2 DET.	
S974	RSH1A019-2U	R. REC INH.	
S975	RSH1A019-2U	F. REC INH.	
S976	RSH1A019-2U	ATS/METAL	
		CONNECTOR(S) AND SOCKET(S)	
CP102	RJS2A0205-2S	CONNECTOR(5P)	
CP305	RJR0113	CONNECTOR(4P)	
CP901A	RJS1A1704	CONNECTOR(4P)	
CP901B	RJS1A1704	CONNECTOR(4P)	
CP902	RJT071H11A	CONNECTOR(11P)	
CS971	RJU071H11M	SOCKET(11P)	
JK601	RJT065K15	CONNECTOR(15P)	
		EARTH PLATE(S)	
E1,2	SNE1004-2	EARTH PLATE	
		CONNECTOR ASS'Y	
FW901	REZ0885	CONNECTOR ASS'Y(8P)	
		<GREASE OR JIG/TOOL>	
		TEST TAPE	
SA1	QZZCFM	HEAD AZIMUTH ADJ. CHECK	
SA2	QZZCWAT	TAPE SPEED ADJ. CHECK	
		GREASE	
SA3	SZZ0L18	FLOIL AK-152	
SA4	RZZ0L02	SWAFLUID #56	
SA5	RZZ0L05	MOLYCOAT EM-20L	

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